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EDITORS :

J. R. Lord, C.B.E., M.B. Henry Devine, O.B.E., M.D.
G. Douglas McRae, M.D.

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"In adopting our title of the *Journal of Mental Science*, published by authority of the *Medico-Psychological Association*, we profess that we cultivate in our pages mental science of a particular kind, namely, such mental science as appertains to medical men who are engaged in the treatment of the insane. But it has been objected that the term mental science is inapplicable, and that the term mental physiology or mental pathology, or psychology, or psychiatry (a term much affected by our German brethren), would have been more correct and appropriate; and that, moreover, we do not deal in mental science, which is properly the sphere of the aspiring metaphysical intellect. If mental science is strictly synonymous with metaphysics, these objections are certainly valid; for although we do not eschew metaphysical discussion, the aim of this JOURNAL is certainly bent upon more attainable objects than the pursuit of those recondite inquiries which have occupied the most ambitious intellects from the time of Plato to the present, with so much labour and so little result. But while we admit that metaphysics may be called one department of mental science, we maintain that mental physiology and mental pathology are also mental science under a different aspect. While metaphysics may be called speculative mental science, mental physiology and pathology, with their vast range of inquiry into insanity, education, crime, and all things which tend to preserve mental health, or to produce mental disease, are not less questions of mental science in its practical, that is in its sociological point of view. If it were not unjust to high mathematics to compare it in any way with abstruse metaphysics, it would illustrate our meaning to say that our practical mental science would fairly bear the same relation to the mental science of the metaphysicians as applied mathematics bears to the pure science. In both instances the aim of the pure science is the attainment of abstract truth; its utility, however, frequently going no further than to serve as a gymnasium for the intellect. In both instances the mixed science aims at, and, to a certain extent, attains immediate practical results of the greatest utility to the welfare of mankind; we therefore maintain that our JOURNAL is not inaptly called the *Journal of Mental Science*, although the science may only attempt to deal with sociological and medical inquiries, relating either to the preservation of the health of the mind or to the amelioration or cure of its diseases; and although not soaring to the height of abstruse metaphysics, we only aim at such metaphysical knowledge as may be available to our purposes, as the mechanic uses the formularies of mathematics. This is our view of the kind of mental science which physicians engaged in the grave responsibility of caring for the mental health of their fellow-men may, in all modesty, pretend to cultivate; and while we cannot doubt that all additions to our certain knowledge in the speculative department of the science will be great gain, the necessities of duty and of danger must ever compel us to pursue that knowledge which is to be obtained in the practical departments of science with the earnestness of real workmen. The captain of a ship would be none the worse for being well acquainted with the higher branches of astronomical science, but it is the practical part of that science as it is applicable to navigation which he is compelled to study."—Sir J. C. Bucknill, M.D., F.R.S.

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- 1844. Dr. Thurnam, York Retreat.
- 1847. Dr. Wintle, Warneford House, Oxford.
- 1851. Dr. Conolly, Hanwell.
- 1852. Dr. Wintle, Warneford House.

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- 1854. A. J. Sutherland, M.D., St. Luke's Hospital, London.
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- 1860. J. C. Bucknill, M.D., Devon County Asylum.
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- 1865. Wm. Wood, M.D., Kensington House.
- 1866. W. A. F. Browne, M.D., Commissioner in Lunacy for Scotland.
- 1867. C. A. Lockhart Robertson, M.D., Haywards Heath Asylum.
- 1868. W. H. O. Sankey, M.D., Sandywell Park, Cheltenham.
- 1869. T. Laycock, M.D., Edinburgh.
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- 1901. Oscar T. Woods, M.D., District Asylum, Cork, Ireland.
- 1902. J. Wigglesworth, M.D., Rainhill Asylum, near Liverpool.

- 1903. Ernest W. White, *C.B.E.*, M.B., City of London Asylum, Stone, Dartford.
- 1904. R. Percy Smith, M.D., 36, Queen Anne Street, Cavendish Square, London, W. 1.
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- 1909. W. Bevan-Lewis, M.Sc., West Riding Asylum, Wakefield.
- 1910. John Macpherson, M.D., Commissioner in Lunacy for Scotland.
- 1911. Wm. R. Dawson, *O.B.E.*, M.D., Inspector of Lunatic Asylums, Dublin Castle, Dublin.
- 1912. J. Greig Soutar, M.B., Barnwood House, Gloucester.
- 1913. James Chambers, M.D., The Priory, Roehampton, S.W.
- 1914-18. David G. Thomson, *C.B.E.*, M.D., County Asylum, Thorpe, Norfolk.
- 1918. John Keay, *C.B.E.*, M.D., Bangour Village, Uphall, Linlithgowshire.
- 1919. Bedford Pierce, M.D.
- 1920. William F. Menzies, M.D., Staffordshire County Mental Hospital, Cheddleton, near Leek.
- 1921. C. Hubert Bond, *C.B.E.*, M.D., Commissioner of the Board of Control.
- 1922. G. M. Robertson, M.D., Royal Hospital, Morningside, Edinburgh.
- 1923. Edwin Goodall, *C.B.E.*, M.D., City Mental Hospital, Cardiff.

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- 1920. Sir J. Crichton-Browne, LL.D., D.Sc., M.D., F.R.S.
- 1921. Sir F. W. Mott, *K.B.E.*, LL.D., M.D., F.R.C.P., F.R.S.
- 1922. Sir M. Craig, *C.B.E.*, M.A., M.D., F.R.C.P.
- 1923. Charles Kirk Clarke, LL.D., M.D.
- 1924. J. Carswell, M.D.

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1896. Allbutt, Sir T. Clifford, *K.C.B.*, D.L., LL.D., M.D.Camb., F.R.C.P.Lond., F.R.S., Regius Professor of Physic, Univ. Camb., St. Radegund's, Cambridge.
1918. Bevan-Lewis, William, M.Sc.Leeds, M.R.C.S., L.R.C.P.Lond., 22, Cromwell Road, Hove. (PRESIDENT, 1909-10.)
1907. Bianchi, Prof. Leonardo, Manicomio Provinciale di Napoli. Musée N. 3, Naples, Italy. (*Corr. Mem.*, 1896.)
1900. Blumer, G. Alder, M.D., L.R.C.P.Edin., Butler Hospital, Providence, U.S.A. (*Ord. Mem.*, 1890.)
1900. Bresler, Johannes, M.D., Sanitätsrat, Director of the Provincial Mental Hospital, Kreuzburg, Oberschlesien, Germany. (Editor of the *Psychiatrisch-neurologische Wochenschrift.*) (*Corr. Mem.*, 1896.)
1902. Brush, Edward N., M.D., Superintendent Emeritus, Sheppard and Enoch Pratt Hospital, Townson, Maryland; Hamilton Road, Mount Washington, Baltimore, Md., U.S.A.
1920. Colin, Dr. H., Secrétaire Général de la Société Médico-Psychologique de Paris, 26, Rue Vanquelin, Paris (V*), France.
1909. Collins, Sir Wm. Job, *K.C.V.O.*, D.L., B.Sc., M.D., M.S.Lond., F.R.C.S. Eng., 1, Albert Terrace, Regent's Park, N.W. 1.
1912. Considine, Thomas Ivory, F.R.C.S., L.R.C.P.Irel., Inspector of Lunatic Asylums, Ireland, Office of Lunatic Asylums, Dublin Castle, Dublin.
1918. Cooke, Sir Edward Marriott, *K.B.E.*, M.D.Lond., Honorary Commissioner, Board of Control, 43, Colherne Court, South Kensington, S.W. 5.
1902. Coupland, Sidney, M.D., F.R.C.P.Lond., Wootton Hill, Boar's Hill, Oxford.
1876. Crichton-Browne, Sir J., LL.D., D.Sc., M.D.Edin., F.R.S., 45, Hans Place, London, S.W. 1. (PRESIDENT, 1878.)
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1895. Ferrier, Sir David, LL.D., M.D., F.R.C.P.Lond., F.R.S., 34, Cavendish Square, London, W. 1.
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1921. Maudsley, Sir Henry Carr, *K.C.M.G.*, *C.B.E.*, M.D., B.S., F.R.C.P.Lond., Consulting Physician, Melbourne Hospital, Victoria.
1889. Needham, Sir Frederick, M.D.St. And., M.R.C.P.Edin., M.R.C.S.Eng., Imperial Hotel, Bournemouth. (PRESIDENT, 1887-88.)
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1881. Peeters, M., M.D.
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1911. Semelaigne, Dr. René, Secrétaire des Séances de la Société Médico-Psychologique de Paris, 59, Boulevard de Montmorency, Paris XVI, France. (*Corresponding Member from 1893.*)

1922. Smith, William Charles Clifford, Esq., *O.B.E.*, *F.R.I.B.A.*, *M.I.C.E.*,
Mental Hospitals Engineer to the London County Council; Dudley
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1901. Toulouse, Dr. Edouard, Médecin des Asiles de la Seine, Directeur du
Laboratoire de Psychologie expérimental à l'École des Hautes
Études, Paris; Laboratoire de Psychologie Expérimentale, 1, Rue
Cabanis, Paris, XIV^e, France.
1910. Trevor, Arthur Hill, Esq., *B.A.Oxon.*, of the Inner Temple, Barrister at
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1923. Willis, Sir Frederick James, *K.B.E.*, *C.B.*, Chairman of the Board of
Control for England, 66, Victoria Street, London, S.W. 1.

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1911. Boedeker, Prof. Dr. Justus Karl Edmund, Privat Docent and Director,
Fichtenhof Asylum, Schlachtensee, Berlin.
1923. Briggs, L. Vernon, M.D., 64, Beacon Street, Boston, Mass., U.S.A.
1897. Buschan, Dr. G., Stettin, Germany.
1904. Coroleu, Wilfrid, Medico forense del distrito de la Barceloneta, Aribau,
31, pral, Chafan Consejo Ciento de 7 à 8, Spain.
1896. Cowan, F. M., M.D., 109, Perponcher Straat, The Hague, Holland.
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Aliénés, Prava da Sandara 288, Rio de Janeiro, Brazil.
1922. Morowoka, Dr., Kyushu University, Japan.
1909. Pilcz, Dr. Alexander, VIII/2 Alserstrasse 43, Wien, Austria.
1922. Sano, Dr., Gheel, Belgium.

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Alphabetical List of Members of the Association on January 1, 1924, with the year in which they joined.

1891. Adair, Thomas Stewart, M.D., C.M.Edin., F.R.M.S., Medical Superintendent, Storthes Hall Mental Hospital, Kirkburton, near Huddersfield. (*Hon. Sec. N. and M. Division*, 1908-20.)
1910. Adam, George Henry, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, West Malling Place, Kent.
1868. Adams, Josiah O., M.D.Durh., F.R.C.S.Eng., J.P., 117, Cazenove Road, Stamford Hill, London, N. 16.
1921. Adamson, James Weeden Woodhams, M.D.Durh., M.R.C.S.Eng., L.R.C.P.&L.S.A.Lond., Senior Neurologist, Ministry of Pensions Hospital, Bath.
1919. Adey, J. K., M.B., C.M.Melb., Sunbury, Victoria, Australia.
1886. Agar, S. Hollingsworth, jun., B.A.Camb., M.R.C.S.Eng., L.S.A., Hurst House, Henley-in-Arden.
1923. Ahern, John Maurice, M.B., B.Ch., R.U.I., L.R.C.P.&S.Irel., Senior Medical Officer, H.M. Prison, Liverpool.
1923. Ainsworth, Cyrus Gerald, M.A., LL.B.Camb., M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, Rainhill Mental Hospital, nr. Liverpool.
1899. Alexander, Hugh de Maine, M.D., C.M.Edin., Medical Superintendent, Kingseat Mental Hospital, Newmachar, Aberdeen.
1922. Alexander, Marion Cameron, M.B., B.Ch.Belf., Assistant Physician, Royal Hospital, Morningside, Edinburgh.
1899. Allmann, Dorah Elizabeth, M.B., B.Ch., R.U.I., Assistant Medical Officer, District Asylum, Armagh.
1908. Anderson, James Richard Sumner, M.B., Ch.B.Glasg., Senior Assistant Medical Officer, Cumberland and Westmorland Mental Hospital, Garlands, Carlisle.
1898. Anderson, John Sewell, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Hull City Asylum, Willerby.
1921. Anderson, William, M.B., Ch.B.Aberd., Senior Assistant Physician, Royal Hospital, Aberdeen.
1918. Anderson, William Kirkpatrick, M.B., Ch.B.Glasg., Medical Officer, Dykebar Hospital for Insane Soldiers, Paisley; 2, Woodside Crescent, Glasgow.
1912. Annandale, James Scott, M.B., Ch.B.Aberd., D.P.M., Senior Assistant Physician, Royal Hospital, Aberdeen.
1912. Apthorp, Frederick William, M.R.C.S.Eng., L.R.C.P.Edin., M.P.C., "Mulgrave," Church Road, Burgess Hill, Sussex.
1904. Archdale, Mervyn Alex., M.B., B.S.Durh., Medical Superintendent, Sunderland Borough Mental Hospital, Ryhope.
1905. Archdall, Mervyn Thomas, L.R.C.P. & S.Edin., L.R.F.P. & S.Glasg., L.S.A.Lond., St. Denys, New Milton, Hants.
1918. Archibald, Alexander John, M.B., Ch.B.Glasg., 245, Langlands Road, Govan, Glasgow.
1918. Archibald, Madeline, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., 245, Langlands Road, Govan, Glasgow.
1882. Armstrong-Jones, Sir Robert, C.B.E., D.Sc.Wales, M.D., B.S., F.R.C.P. Lond., F.R.C.S.Eng., J.P., 9, Bramham Gardens, London, S.W. 5 (and Plâs Dinas, Carnarvon, North Wales). (*Gen. Secretary from 1897 to 1906.*) (PRESIDENT, 1906-7.) Lord Chancellor's Visitor-in-Lunacy. (Lect. on Ment. Dis. St. Bart.'s Hosp.)
1910. Auden, George Augustus, M.A., M.D., B.Ch.Camb., F.R.C.P.Lond., D.P.H.Camb., F.S.A., School Medical Officer, Education Office, Council House, Margaret Street, Birmingham.
1891. Aveline, Henry T. S., M.D.Durh., M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Superintendent, Somerset and Bath County Asylum, Cotford, near Taunton. (*Hon. Sec. for S.W. Division*, 1905-11.)

1922. Back, Frederick, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, South Yorkshire Mental Hospital, Sheffield.
1909. Bain, John, M.A., M.B., B.Ch.Glasg., Medical Superintendent, Derby Borough Mental Hospital, Rowditch.
1913. Bainbridge, Charles Frederick, M.B., Ch.B.Edin., Assistant Medical Officer, Devon County Mental Hospital, Exminster.
1906. Baird, Harvey, M.D., Ch.B.Edin., Periteau, Winchelsea, Sussex.
1923. Baker, Geoffrey Thomas, M.C., L.M.S.S.A., Assistant Medical Officer, Kent County Mental Hospital, Chartham Down, near Canterbury.
1878. Baker, Hy. Morton, M.B., C.M.Edin., 65, Cole Park Road, Twickenham.
1888. Baker, Sir John, M.D., C.M.Aberd., The Homestead, Park Road, Camberley, Surrey.
1922. Banbury, Percy, M.R.C.S., L.R.C.P.Lond., Assistant Physician, Crichton Royal Institution, Dumfries; 32, Princess Road, Bournemouth West.
1922. Barclay, Rachel Mary, M.A., M.D., Dipl. Psych. Edin., 2, W. Crosscauseway, Edinburgh.
1904. Barham, Guy Foster, M.A., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Claybury Mental Hospital, Woodford Bridge, Essex.
1919. Barkas, Mary Rushton, M.Sc.N.Z., M.D., B.S., M.R.C.S., L.R.C.P., D.P.M.Lond., Assistant Medical Officer, The Maudsley Hospital, Denmark Hill, S.E. 5; 46, Connaught Street, W. 2.
1913. Barkley, James Morgan, M.B., Ch.B.Edin., Senior Medical Officer, Bracebridge Asylum, Lincolnshire.
1923. Barnes, Francis Gregory Lawson, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
1910. Bartlett, George Norton, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, County Mental Hospital, Mickleover, Derby. (*Secretary South-Western Division, 1916-22.*)
1923. Barton, Michael, L.R.C.P.&S.Irel., Assistant Medical Officer, Grangegorman District Mental Hospital, Dublin.
1901. Baskin, J. Loughheed, M.D.Bru., L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., c/o Messrs. Holt & Co., Charing Cross, S.W. 1.
1902. Baugh, Leonard Dieckmann Hamilton, M.B., Ch.B.Edin., The Pleasaunce, York.
1874. Beach, Fletcher, M.B., F.R.C.P.Lond., 5, De Crespigny Park, Denmark Hill, S.E. 5. (*Secretary Parliamentary Committee, 1896-1906. General Secretary, 1889-1896. PRESIDENT, 1900-01.*)
1892. Beadles, Cecil F., M.R.C.S., L.R.C.P.Lond., Gresham House, Egham Hill, Egham.
1921. Beaton, Thomas, O.B.E., M.D., B.S.Lond., M.R.C.S., M.R.C.P.Lond., Senior Assistant Physician, Bethlem Royal Hospital, London, S.E. 1.
1913. Bedford, Percy William Page, M.D., Ch.B., Dipl. Psych. Edin., Assistant Medical Officer, Dorset County Mental Hospital, Herrison, Dorchester.
1909. Beeley, Arthur, M.Sc.Leeds, M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond., D.P.H.Camb., Assistant Medical Officer, E. Sussex Educational Committee, Windybank, King Henry's Road, Lewes.
1922. Bell, Andrew Allan, M.B., Ch.B.Glasg., Pathologist and Assistant Medical Officer, Hawkhead Mental Hospital, Cardonald, N.B.
1914. Bennett, James Wodderspoon, M.R.C.S., L.R.C.P.Lond., Marsden, Babbacombe Road, Torquay.
1912. Benson, Henry Porter D'Arcy, M.D., C.M., F.R.C.S., M.R.C.P.Edin., Umlala, nr. Durban, S. Africa.
1914. Benson, John Robinson, F.R.C.S.Eng., L.R.C.P.Lond., Resident Physician, Fiddington House, Market Lavington, Wilts.
1899. Beresford, Edwyn H., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Tooting Bec Mental Hospital, Tooting, London, S.W. 17.

1922. Berkeley-Hill, Owen A. R., M.D., B.Ch.Oxon., M.R.C.S.Eng., *Major I.M.S.*, Medical Superintendent, Mental Hospital for Europeans, Ranchi, Bihar and Orissa, India.
1912. Berncastle, Herbert Melbourne, Ph.D.U.S.A., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Croydon Mental Hospital, Warlingham, Surrey.
1922. Binnie, Susan Anderson, M.B., Ch.B.Edin., Assistant M.O. and Pathologist, Mental Hospital, Bangour Village, West Lothian.
1920. Birch, W. S., M.C., M.R.C.S., L.R.C.P.Lond., Jamaica Mental Hospital, Kingston, Jamaica.
1894. Blachford, James Vincent, C.B.E., M.D., B.S.Durh., M.R.C.S., L.R.C.P.Lond., M.P.C., 87, Belvedere Road, Upper Norwood, S.E. 19.
1898. Blair, David, M.A., M.D., C.M.Glasg., Deputy Medical Superintendent, County Mental Hospital, Lancaster.
1919. Blake, Stanley, L.R.C.P.&S.Irel., Assistant Medical Officer, Portrane Asylum, Donabate, Ireland.
1897. Blandford, Joseph John Guthrie, B.A.Camb., M.R.C.S., L.R.C.P.Lond., D.P.H.Camb.
1918. Blandford, Walter Folliott, B.A.Camb., M.R.C.S., L.R.C.P.Lond., Devonshire Club, S.W. 1.
1904. Bodvel-Roberts, Hugh Frank, M.A.Camb., M.R.C.S., L.R.C.P.Lond., L.S.A., Senior Assistant Medical Officer, Napsbury Mental Hospital, near St. Albans, Herts.
1920. Boland, James Joseph, M.B., B.Ch.N.U.I., Assistant Medical Officer, House of St. John of God, Stillorgan, Co. Dublin.
1900. Bolton, Joseph Shaw, D.Sc., M.D., B.S., F.R.C.P.Lond., Medical Superintendent, West Riding Asylum, Wakefield. (Prof. of Ment. Dis., Univ. of Leeds.)
1892. Bond, Charles Hubert, C.B.E., D.Sc., M.D., C.M.Edin., F.R.C.P.Lond., M.P.C., Commissioner of the Board of Control, 66, Victoria Street, London, S.W. 1. (*Hon. General Secretary*, 1906-12.) (PRESIDENT, 1921-22.)
1922. Bostock, John, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Eng., D.P.M., Senior Medical Officer, The Mental Hospital, Callan Park, Sydney, N.S.W.
1920. Bowen, Tudor David John, M.R.C.S., L.R.C.P.Lond., Cae Cob, St. Mellons, near Cardiff.
1918. Bower, Cedric William, L.M.S.S.A., Joint Medical Officer, Springfield House, near Bedford.
1877. Bower, David, M.D., C.M.Aberd., L.R.C.P.&S.Glasg., Springfield House, Bedford. (*Chairman, Parliamentary Committee*, 1907-1910.)
1917. Bowie, Edgar Ormond, L.A.H., D.P.H.Dubl., Dip. Grant Med. Coll., Bombay; County and City Mental Hospital, Burghill, near Hereford.
1900. Bowles, Alfred, M.R.C.S., L.R.C.P.Lond., Park View, 2, Lascelles Terrace, Eastbourne.
1896. Boycott, Arthur N., M.D.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Herts County Mental Hospital, Hill End, St. Albans, Herts. (*Hon. Sec. for S.E. Division*, 1900-05.)
1898. Boyle, A. Helen A., M.D.Bru.x., L.R.C.P.&S.Edin., 9, The Drive, Hove, Brighton.
1922. Bramwell, Edwin, M.D., F.R.C.P.Edin. & Lond., F.R.S.Edin., Physician to the Royal Infirmary, Edinburgh, 23, Drumsheugh Gardens, Edinburgh. (Prof. of Clinical Medicine, Univ. of Edinburgh.)
1911. Brander, John, M.B., C.B.Edin., D.P.M., Deputy Medical Superintendent, London County Mental Hospital, Bexley, Kent.
1919. Branthwaite, Robert Welsh, C.B., M.D.Bru.x., M.R.C.S., L.R.C.P.Lond., D.P.H., Commissioner of the Board of Control, 66, Victoria Street, London, S.W. 1.
1922. Brock, Arthur J., M.D., Ch.B.Edin., 8, Rothesay Place, Edinburgh.
1905. Brown, Harry Egerton, M.D., Ch.B.Glasg., M.P.C., c/o Digby S. Brown, 116, Hope Street, Glasgow.

Members of the Association.

1923. Brown, Malcolm, M.B., Ch.B.Glasg., Assistant Medical Officer and Pathologist, Gartloch Mental Hospital, Gartcosh, N.B.
1908. Brown, Robert Cunyngham, C.B.E., M.D., B.S.Durh., Ministry of Pensions, Westminster, London, S.W. 1.
1908. Brown, R. Dods, M.D., Ch.B., F.R.C.P., Dipl. Psych., D.P.H.Edin., Medical Superintendent, The Royal Asylum, Aberdeen.
1912. Brown, William, M.D., C.M.Glasg., M.P.C., Medical Officer to Stoke Park Colony; 1, Manor Road, Fishponds, Bristol.
1916. Brown, William, D.Sc.Lond., M.A., M.D., B.Ch.Oxon., Wilde Reader in Mental Philosophy, Univ. Oxford; 88, Harley Street, London, W. 1.
1917. Bruce, Alexander Ninian, D.Sc., M.D., F.R.C.P.Edin., 8, Ainslie Place, Edinburgh. (Lect. on Neurology, Univ. of Edin.)
1893. Bruce, Lewis C., M.C., M.D., F.R.C.P.Edin., M.P.C., Medical Superintendent, District Asylum, Druid Park, Murthly, N.B. (*Co-Editor of Journal*, 1911-1916; *Hon. Sec. for Scottish Division*, 1901-1907.)
1913. Brunton, George Llewellyn, M.D., Ch.B.Edin., Medical Superintendent, Nottingham City Mental Hospital, Mapperley Hill
1920. Bryce, William Henderson, M.B., C.M.Edin., Resident Physician, Kenlaw House, Colinsburgh, Fife.
1912. Buchanan, William Murdoch, M.B., Ch.B.Glasg., Kirklands Asylum, Bothwell, Lanarkshire. (*Hon. Sec. for Scottish Division from 1920.*)
1923. Buckley, Winifred Finimore, O.B.E., M.R.C.S., L.R.C.P.Lond., 5, Brunswick Place, Hove.
1912. Burke, Joseph Dominick Gabriel, M.B., B.Ch.R.U.I., Senior Assistant Medical Officer, St. Audry's Hospital, Melton, Suffolk.
1921. Butcher, Walter Herbert, M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P.Lond., c/o Westminster Bank, Stratford Place, London, W. 1.
1921. Buzzard, Edward Farquhar, M.A., M.D.Oxon., F.R.C.P.Lond., Physician to St. Thomas's Hospital and to the National Hospital for the Paralysed, Queen Square, W.C.; 78, Wimpole Street, London, W. 1.
1921. Caldicott, Charles Holt, M.B.E., M.B.Lond., M.R.C.S., L.R.C.P.Lond., Grantbourne, Chobham, Surrey.
1894. Campbell, Alfred Walter, M.D., C.M.Edin., M.P.C., Macquarie Chambers, 183, Macquarie Street, Sydney, New South Wales.
1909. Campbell, Donald Graham, M.B., C.M.Edin., F.S.A.Scotl., Medical Officer, District Asylum, "Auchinellan," 12, Reidhaven Street, Elgin.
1914. Campbell, Finlay Stewart, M.D., C.M.Glasg., D.C.M.S. Ministry of Pensions, 26, Sandgate, Ayr, Scotland.
1897. Campbell, Robert Brown, M.D., C.M., F.R.C.P.Edin., Medical Superintendent, Stirling District Asylum, Larbert. (*Secretary for Scottish Division*, 1910-20.)
1905. Carre, Henry, L.R.C.P.&S.Irel., Medical Superintendent, Woodilee Mental Hospital, Lenzie, Glasgow.
1891. Carswell, John, F.R.F.P.&S.Glasg., L.R.C.P.Edin., J.P., 96, Heath Street, Hampstead, N.W. 3.
1874. Cassidy, D. M., D.Sc.Edin., M.D., C.M.McGill, F.R.C.S.Edin., Medical Superintendent, County Mental Hospital, Lancaster.
1922. Casson, Elizabeth, M.B., Ch.B., D.P.M.Lond., Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey.
1888. Chambers, James, M.A., M.D.R.U.I., M.P.C., The Priory, Roehampton, London, S.W. 15. (*Co-Editor of Journal*, 1905-1914, *Assistant Editor*, 1900-05.) (*PRESIDENT*, 1913-14.) (*Treasurer since 1917.*) (Lect. on Ment. Dis., Middlesex Hosp.)
1911. Chambers, Walter Duncan, M.A., M.D., Ch.B.Edin., M.P.C., Physician, Superintendent, James Murray's Royal Asylum; Murray House, Perth.
1923. Chevens, Leslie Charles Frederick, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Cheshire County Mental Hospital, Parkside, Macclesfield.
1915. Cheyne, Alfred William Harper, M.B., Ch.B.Aberd., Luchgreen, New Deer, Aberdeenshire.

1917. Chisholm, Percy, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., O.C., Queen Mary Hospital, Hammersprings, New Zealand.
1907. Chislett, Charles Game Angus, M.B., Ch.B.Glasg., F.R.F.P.&S.Glasg., Superintendent, Stoneyetts, Chryston, Lanark.
1921. Cholmeley, Mountague Adye, M.R.C.S., L.R.C.P.Lond., D.P.M., Ministry of Pensions Hospital, Orpington, Kent.
1880. Christie, J. W. Stirling, L.R.C.P.&S.Edin., 21, St. Matthew's Gardens, St. Leonards-on-Sea.
1922. Chuckerbutty, Sites Chunder, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Major I.M.S., Medical Superintendent, European Mental Hospital, Kanki (Ranchi), India ; c/o Messrs. Grindlay & Co., 11, Hastings Street, Calcutta, India.
1920. Clark, R. M., M.B., C.M.Edin., Medical Superintendent, County Mental Hospital, Whittingham, Preston.
1907. Clarke, Geoffrey, M.D.Lond., Medical Superintendent, London County Mental Hospital, Bexley, Kent.
1907. Clarkson, Robert Durward, B.Sc., M.D., C.M.Edin., F.R.C.P.Edin. (Medical Officer, Scottish National Institute for the Education of Imbecile Children), The Park, Larbert, Stirling.
1892. Cole, Robert Henry, M.D.Lond., F.R.C.P.Lond., 25, Upper Berkeley Street, London, W. 1. (*Secretary of Parliamentary Committee, 1912-21, Chairman since 1921.*) (Lect. on Ment. Dis., St. Mary's Hosp.)
1900. Cole, Sydney John, M.A., M.D., B.Ch.Oxon., Medical Superintendent, Wilts County Asylum, Devizes.
1906. Collier, Walter Edgar, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Kent County Mental Hospital, Barming Heath, Maidstone.
1903. Collins, Michael Abdy, O.B.E., M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Kent County Mental Hospital, Chartham Downs. (*Hon. General Secretary, 1912-18.*)
1910. Conlon, Thomas Peter, L.R.C.P.&S.Irel., Resident Medical Superintendent, District Asylum, Monaghan.
1921. Connell, Ernest Henry, M.B., Ch.B.Edin., 7, Greenhill Gardens, Edinburgh.
1920. Connell, O. G., M.C., L.R.C.P.&S.Irel., Medical Superintendent, Norfolk County Mental Hospital, Thorpe, Norwich.
1914. Connolly, Victor Lindley, M.C., M.B., B.Ch.Belf., D.P.M., Assistant Medical Officer, Long Grove Mental Hospital, Epsom.
1910. Coombes, Percival Charles, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Surrey County Mental Hospital, Netherne, near Coudson.
1921. Cooper, Alexander, M.A., M.B., Ch.B.Aberd., Park View, Cults, Aberdeenshire.
1903. Cormac, Harry Dove, M.B., B.S.Madras, Medical Superintendent, Parkside House, Macclesfield.
1891. Corner, Harry, M.D.Lond., M.R.C.S., L.R.C.P.Lond., M.P.C., 37, Harley Street, London, W. 1, and Brook House, Southgate, N. 14.
1917. Costello, Christopher, M.B., B.Ch.N.U.I., Assistant Medical Officer, Portrane Mental Hospital, Donabate, co. Dublin.
1897. Cotton, William, M.A., M.D.Edin., D.P.H., M.P.C., 231, Gloucester Road, Bishopston, Bristol.
1910. Coupland, William Henry, L.R.C.S.&P.Edin., Medical Superintendent, Royal Albert Institution, Albert House, Haverbreaks, Lancaster.
1913. Court, E. Percy, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Derby Borough Mental Hospital, Rowditch.
1893. Cowen, Thomas Philip, M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond., 53, Westwood Road, Southampton.
1911. Cox, Donald Maxwell, M.R.C.S., L.R.C.P.Lond., County and City Mental Hospital, Burghill, Hereford.
1918. Cox, The Rt. Hon. M. F., LL.D., M.D.R.U.I., F.R.C.P.Irel., Physician, St. Vincent's Hospital, Dublin ; Lord Chancellor's Consulting Visitor in Lunacy for County and City of Dublin ; 26, Merrion Square, Dublin.

1893. Craig, Sir Maurice, *C.B.E.*, M.A., M.D., B.Ch.Camb., F.R.C.P.Lond., M.P.C., 87, Harley Street, London, W. 1. (*Hon. Secretary of Educational Committee, 1905-8; Chairman of Educational Committee, 1912-19.*) (Lect. on Psychol. Med., Guy's Hosp.)
1923. Craigie, James, M.B., Ch.B.St. And., Assistant Medical Officer, Murray Royal, Perth.
1897. Cribb, Harry Gifford, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Winterton Asylum, Ferryhill, Durham.
1911. Crichlow, Charles Adolphus, M.B., Ch.B.Glasg., Senior Assistant Medical Officer, Bangour Village, West Lothian.
1917. Crocket, James, M.D.Edin., D.P.H., Medical Superintendent, Colony of Mercy for Epileptics, Consumption Sanatoria of Scotland, Craigielea, Bridge of Weir.
1915. Crosthwaite, Frederick Douglas, M.B., Ch.B.Edin., D.P.H., Mental Hospital, Queenstown, Cape Province, South Africa.
1923. Crow, Norah Annie, M.D., B.S.Lond., Resident Medical Officer, Lady Chichester Hospital; Aldrington House, New Church Road, Hove, Sussex.
1919. Cuthbert, James Harvey, M.B., Ch.B.Edin., Senior Assistant Medical Officer, West Ham Mental Hospital, 63, Eastwood Road, Goodmayes, Essex.
1907. Daniel, Alfred Wilson, B.A., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Hanwell Mental Hospital, Southall, Middlesex. (*Secretary of Educational Committee since 1920.*)
1896. Davidson, Andrew, M.D., C.M.Aberd., M.P.C., c/o A. Fraser, Esq., J.P., Forres, Scotland. (Lect. on Psychological Medicine, University of Sydney.)
1922. Davie, Thomas Macnaughton, M.C., M.D., Ch.B.Edin., D.P.M., Barrister-at-Law, Craig House, Assistant Physician, Royal Hospital, Edinburgh.
1921. Davies-Jones, Charles William Saunderson, M.B., Ch.B.Edin., Senior Assistant Medical Officer, Ashurst Hospital, Littlemore, Oxford.
1894. Dawson, William R., *O.B.E.*, B.A., M.B., B.Ch.Dubl., F.R.C.P.Irel., M.P.C., D.P.H., Chief Medical Officer, Ministry of Home Affairs, North Ireland; 26, Windsor Park, Belfast. (*Hon. Sec. to Irish Division, 1902-11; PRESIDENT, 1911-12; Co-Editor of the Journal, 1920-21.*)
1920. Dawson, William Siegfried, M.A., M.D., B.Ch.Oxon., M.R.C.S., M.R.C.P., D.P.M.Lond., Senior Assistant Medical Officer, Maudsley Hospital, Denmark Hill, London, S.E. 5.
1922. Dearden, Harold, B.A.Camb., M.R.C.S., L.R.C.P.Lond., 45, Curzon Street, London, W. 1.
1901. De Steiger, Adele, M.D.Lond., Ford College, Hollow Lane, Lingfield, Surrey.
1905. Devine, Henry, *O.B.E.*, M.D., B.S., F.R.C.P.Lond., M.R.C.S.Eng. M.P.C., Medical Superintendent, Borough Mental Hospital, Milton, Portsmouth. (*Co-Editor of the Journal since 1920; Assistant Editor, 1916-20.*)
1904. Devon, James, F.R.F.P.&S.Glasg., L.R.C.P.&S.Edin., 11, Rutland Square, Edinburgh.
1921. Dick, Alexander, M.C., M.B., Ch.B.Glasg., Assistant Medical Officer, Glasgow District Mental Hospital, Woodilee, Lenzie.
1922. Dickson, James, M.C., M.B., Ch.B.Edin., Assistant Physician, Crichton Royal Institution, Dumfries.
1915. Dillon, Frederick, M.D., Ch.B.Edin., Medical Superintendent, Northumberland House Mental Hospital, Finsbury Park, N. 4; 72, Wimpole Street, London, W. 1.
1909. Dillon, Kathleen, L.R.C.P.&S.Irel., Assistant Medical Officer, District Asylum, Mullingar.
1905. Dixon, J. Francis, M.A., M.D., B.Ch.Dubl., M.P.C., Medical Superintendent, Borough Mental Hospital, Humberstone, Leicester.

1879. Dodds, William John, D.Sc., M.D., C.M.Edin., 19, Marina Road, Prestwick, Ayrshire.
1892. Donelan, John O'Connor, L.R.C.P.&S.Irel., M.P.C. (Med. Supt., Grangegorman District Mental Hospital, Dublin), St. Dymphna's, North Circular Road, Dublin. (Lect. on Ment. Dis., Univ. of Dublin.)
1910. Downey, Michael Henry, D.S.O., M.B., Ch.B.Melb., L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Medical Superintendent, Parkside Asylum, Adelaide, South Australia.
1919. Drake-Brockman, Henry George, M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, City Mental Hospital, Middlesbrough.
1923. Draper, Arthur Phillip, M.C., M.D., B.Ch.Dubl., Capt. R.A.M.C., Mental Specialist, Southern Command, India; Mental Section, Deolali, India.
1916. Drummond, William Blackley, M.D., C.M.Edin., F.R.C.P.Edin., Medical Superintendent, Baldovan Institution, Dundee.
1921. Drury, Kenneth Kirkpatrick, M.C., M.D., B.Ch.Dubl., Deputy Superintendent, County Mental Hospital, Stafford; "Swift Brook," Corporation Street, Stafford.
1907. Dryden, Arthur Mitchell, M.B., Ch.B.Edin., Senior Assistant Medical Officer, Woodilee Mental Hospital, Lenzie.
1902. Dudgeon, Herbert Wm., M.D., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Khanka Government Asylum, Egypt.
1899. Dudley, Francis, L.R.C.P.&S.Irel., Medical Superintendent, Cornwall County Asylum, Bodmin.
Heybridge Avenue, Streatham, London, S.W. 16.
1922. Duncan, Williams Arthur, M.B., Ch.B.Edin., Second Assistant Medical Officer, East Sussex County Mental Hospital, Hellingly, Sussex.
1923. Dunne, John, M.B., B.Ch., R.U.I., Assistant Medical Officer, Grangegorman District Mental Hospital, Dublin.
1922. Dunlea, John Gerald, M.B., B.Ch.N.U.I., Kent County Mental Hospital, Barming Heath, Maidstone.
1921. Dunlop, George William Cunningham, M.B., Ch.B.Edin., Assistant Medical Officer, County Mental Hospital, Whittingham.
1922. Dunscombe, Nicholas Dunscombe, M.A., M.B., B.Ch.Cantab., L.M.S.S.A. Lond., F.R.I.P.H., Barrister-at-Law, 68, Leith Mansions, Maida Vale, W. 9.
1903. Dunston, John Thomas, M.D., B.S.Lond., Commissioner of Mental Disorders and Defective Persons, South Africa, and Medical Superintendent, West Koppies Mental Hospital, Pretoria, South Africa.
1923. Dwyer, Patrick, M.B., B.Ch., R.U.I., Assistant Medical Officer, Grangegorman District Mental Hospital, Dublin.
1899. Eades, Albert I., L.R.C.P.&S.Irel., Medical Superintendent, North Riding Mental Hospital, Clifton, Yorks.
1906. Eager, Richard, O.B.E., M.D., Ch.B.Aberd., M.P.C., Medical Superintendent, Devon County Mental Hospital, Exminster.
1891. Earls, James Henry, M.D., M.Ch.R.U.I., L.S.A., D.P.H.Lond., M.P.C., Barrister-at-Law, Fenstanton, Christchurch Road, Streatham Hill, London, S.W. 2.
1921. East, Guy R., M.D., B.S., B.Hy.Durh., D.P.H., Medical Superintendent, Northumberland County Mental Hospital, Collingwood, Morpeth.
1907. East, Wm. Norwood, M.D.Lond., M.R.C.S., L.R.C.P.Lond., M.P.C., H.M. Prison, Brixton; 95, King's Avenue, Clapham Park, S.W.
1895. Easterbrook, Charles C., M.A., M.D., F.R.C.P.Edin., M.P.C., J.P., Physician Superintendent, Crichton Royal Institution, Dumfries.
1895. Edgerley, Samuel, M.A., M.D., C.M.Edin., M.P.C., Medical Superintendent, West Riding Asylum, Menston, nr. Leeds.
1897. Edwards, Francis Henry, M.D.Bru., M.R.C.S., M.R.C.P.Lond., Medical Superintendent, Camberwell House, London, S.E. 5.
1919. Eggleston, Henry, M.B., B.S.Durh., M.P.C., Filey Lodge, Billericay, Essex.
1901. Elgee, Samuel Charles, O.B.E., L.R.C.P.&S.Irel., Medical Superintendent, Cane Hill Mental Hospital, Purley, Surrey.

- 1923. El Kholy, Mohamed Kamil, M.R.C.S., L.R.C.P.Lond., 2nd Assistant Medical Officer, Abbasia Asylum, Cairo, Egypt.
- 1889. Elkins, Frank Ashby, M.D., C.M.Edin., M.P.C., Waingroves Cottage, 121, Rickmansworth Road, Watford, Herts.
- 1912. Ellerton, John Frederick Heise, M.D.Brux., M.R.C.S.Eng., L.R.C.P. Edin., Rotherwood, Leamington Spa.
- 1917. Ellis, Vincent C., M.B., B.Ch.,Dubl., Civic Guard Depot, Phoenix Park, Dublin.
- 1908. Ellison, Arthur, M.R.C.S., L.R.C.P.Lond., 10, Sholebroke Avenue, Leeds.
- 1899. Ellison, F. C., B.A., M.D., B.Ch.Dubl., Medical Superintendent, Mayo County Mental Hospital, Castlebar.
- 1901. Erskine, Wm. J. A., M.D., C.M.Edin., Medical Superintendent, County Mental Hospital, Whitecroft, Newport, I. of W.
- 1895. Eurich, Frederick Wilhelm, M.D., C.M.Edin., Lanshawe Cottage, Ilkley, Yorks. (Professor of Forensic Medicine, University of Leeds.)
- 1894. Eustace, Henry Marcus, B.A., M.D., B.Ch.Dubl., M.P.C., Medical Superintendent, Hampstead and Highfield Private Asylum, Glasnevin, Dublin.
- 1909. Eustace, William Neilson, L.R.C.S.&P.Irel., Resident Medical Officer, Glasnevin, Dublin.
- 1918. Evans, A. Edward, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., D.P.H. Liverp., Inspector, Board of Control, 3, Rotherwick Court, Golders Green, London, N.W. 4.
- 1918. Evans, Tudor Benson, M.B., Ch.B.Liverp., 184, Upper Warwick Street, Liverpool.
- 1891. Ewan, John Alfred, M.A.St.And., M.D., C.M.Edin., M.P.C., Greylees, Sleaford, Lincs.
- 1914. Ewing, Cecil Wilmot, L.R.C.P.&S.Irel., D.P.M., Deputy Medical Superintendent, Storthes Hall Asylum, Kirkburton, nr. Huddersfield.
- 1894. Farquharson, William F., M.D., C.M.Edin., M.P.C., Medical Superintendent, Cumberland and Westmorland Mental Hospital, Garlands, Carlisle.
- 1921. Farran-Ridge, Clive, M.B., Ch.M.Syd., D.P.M.Lond., Assistant Medical Officer, County Mental Hospital, Stafford.
- 1907. Farries, John Stothart, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., The Cottage, Hethersgill, Carlisle.
- 1903. Fennell, Charles Henry, M.A., M.D.Oxon., M.R.C.P.Lond., D.C.M.S., Ministry of Pensions, 27, Cadogan Court, S.W. 3.
- 1908. Fenton, Henry Felix, M.B., Ch.B.Edin., Assistant Medical Officer, County and City Mental Hospital, Powick, near Worcester.
- 1906. Fielding, Saville James, M.B., B.S.Durh., Medical Superintendent, Bethel Hospital, Norwich.
- 1889. Finlay, David, M.D., C.M.Glasg., Medical Superintendent, Glamorgan County Asylum, Bridgend.
- 1906. Firth, Arthur Marcus, M.A., M.D., B.Ch.Edin., Deputy Medical Superintendent, Worcestershire County Mental Hospital, Barnesley Hall, Bromsgrove.
- 1903. Fitzgerald, Alexis, L.R.C.P.&S.Irel., Medical Superintendent, District Asylum, Waterford.
- 1908. Fitzgerald, James Francis, L.R.C.P.&S.Irel., Assistant Medical Officer, District Asylum, Clonmel, co. Tipperary, Ireland.
- 1923. Fitzgerald, John Joseph, M.D.Durh., M.D.Brux., L.R.C.P.Irel., L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., L.A.H.Dubl., Assistant Medical Officer, District Mental Hospital, Cork. (Lect. on Clinical Psychiatry, Cork.)
- 1921. Fleming, Gerald William T. H., M.R.C.S.Eng., L.R.C.P.Lond., Deputy Medical Superintendent, Sunderland Mental Hospital, Ryhope, Sunderland.
- 1904. Fleming, Wilfrid Louis Remi, M.R.C.S., L.R.C.P.Lond., Suffolk House, Pirbright, Surrey.
- 1894. Fleury, Eleonora Lilian, M.D., B.Ch.R.U.I., Assistant Medical Officer, Portrane Asylum, Donabate, co. Dublin.

1902. Forde, Michael J., M.D., B.Ch.R.U.I., Assistant Medical Officer, Grangegorman Mental Hospital, Dublin.
1911. Forrester, Archibald Thomas William, M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Warwickshire County Mental Hospital, Hatton.
1916. Forsyth, Charles Wesley, M.D.Lond., M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, Hollymoor Mental Hospital, Northfield, Birmingham.
1913. Forward, Ernest Lionel, M.R.C.S., L.R.C.P.Lond., D.C.M.S. Ministry of Pensions, 2, Sanctuary Buildings, London, S.W. 1.
1913. Fothergill, Claude Francis, B.A., M.B., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond.; "Hensol," Chorley Wood, Herts; and 150, Harley Street, W. 1.
1920. Fox, J. Tylor, M.A., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Superintendent, Lingfield Epileptic Colony; The Homestead, Lingfield, Surrey.
1923. Franklin, Marjorie Ellen, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Eng., D.P.M., Medical Officer, Tavistock Clinic for Functional Nerve Cases; 28, Wimpole Street, Cavendish Square, London, W. 1.
1881. Fraser, Donald, M.D., C.M.Glasg., F.R.F.P.&S.Glasg., Connel Cothal, nr. Aberdeen.
1919. Fraser, Kate, B.Sc., M.D., Ch.B.Glasg., D.P.H., Deputy Commissioner, General Board of Control, Scotland; 25, Palmerston Place, Edinburgh.
1921. Fuller, Hugh Hercus Cavendish, M.B., Ch.B.Edin., Medical Officer, Malvern College; "Oakdale," Priory Road, Great Malvern.
1902. Fuller, Lawrence Otway, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Three Counties' Mental Hospital, Arlesey, Beds.
1906. Gane, Edward Palmer Steward, M.D.Durh., M.R.C.S., L.R.C.P.Lond., Assistant Medical Superintendent, The Coppice, Nottingham.
1912. Garry, John William, M.B., B.Ch.N.U.I., Assistant Medical Superintendent, Clare County Mental Hospital, Ennis, Ireland.
1922. Gasperine, John Jones, M.R.C.S., L.R.C.P.Lond., D.P.H., D.P.M., c/o St. Bartholomew's Hospital, E.C. 1.
1912. Gavin, Lawrence, M.B., Ch.B., L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Medical Superintendent, Mullingar District Asylum, Ireland.
1896. Geddes, John W., M.B., C.M.Edin., Medical Superintendent, Borough Mental Hospital, Middlesbrough, Yorks.
1892. Gemmel, James Francis, M.B., C.M.Glasg., 3, Grange Terrace, Edinburgh.
1923. Gibson, George, D.S.O., M.D., F.R.C.P.Edin., Deputy Commissioner, General Board of Control, Scotland; 23, Cluny Terrace, Edinburgh.
1919. Gifford, John, B.A.Cape, M.B., Ch.B.Edin., Senior Assistant Medical Officer, Derby County Mental Hospital, Mickleover, Derby.
1921. Gilfillan, John Aitken, M.D., Ch.B., F.R.F.P.&S.Glasg., D.P.M., Second Assistant Medical Officer, City Mental Hospital, Humberstone, Leicester.
1899. Gilfillan, Samuel James, O.B.E., M.A., M.B., C.M.Edin., Medical Superintendent, Colney Hatch Mental Hospital, New Southgate, London, N. 11.
1889. Gill, Stanley Augustine, B.A.Dubl., M.D.Durh., M.R.C.S., M.R.C.P.Lond., Shaftesbury House, Formby, Liverpool.
1923. Gillespie, Isabella Annie, M.B., B.Ch.Edin., Junior Assistant Medical Officer, County Mental Hospital, Upton, Chester.
1921. Gillespie, Robert Dick, M.B., Ch.B.Glasg., Assistant in Psychiatry, Prof. A. Meyer's Clinic, The Johns Hopkins Hospital, Baltimore, Maryland, U.S.A.
1920. Gillis, Kurt, M.B., Ch.B.Edin., Assistant Physician, Alexandra Hospital, Maitland, S. Africa; Observation Road, Cape Town, S. Africa.
1897. Gilmour, John Rutherford, M.B., C.M., F.R.C.P.Edin., M.P.C., Medical Superintendent, West Riding Asylum, Scalebor Park, Burley-in-Wharfedale, Yorks. (*Hon. Sec. N. and M. Division from 1920.*)

1906. Gilmour, Richard Withers, M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Physician-in-Charge, St. Luke's Hospital, 19, Nottingham Place, W. 1.
1878. Glendinning, James, M.D.Glasg., L.R.C.S.Edin., Lyndhurst, Avenue Road, Abergavenny.
1923. Golla, Frederick Lucien, M.A., M.B., B.Ch.Oxon., F.R.C.P.Lond, Director of the Laboratory and Pathologist to the London County Mental Hospitals, The Maudsley Hospital, Denmark Hill, S.E. 5; The Dene, Sunninghill.
1897. Good, Thomas Saxty, O.B.E., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Ashurst Mental Hospital, Littlemore, Oxford.
1889. Goodall, Edwin, C.B.E., M.D., B.S., F.R.C.P.Lond., M.P.C., Medical Superintendent, City Mental Hospital, Cardiff. (PRESIDENT, 1923-24.) (Lect. on Ment. Dis., Welsh Nat. School of Medicine, Cardiff.)
1920. Gordon, George, M.B., Ch.B.Glasg., Neurologist, Ministry of Pensions Hospital, Saltash, Plymouth.
1899. Gordon, James Leslie, M.D., C.M.Aberd., Medical Superintendent, Caterham Mental Hospital, Karaissi, Caterham, Surrey.
1901. Gostwyck, Cecil Hubert Gostwyck, M.B., Ch.B., F.R.C.P.Edin., M.P.C., Dipl. Psych., Assistant Medical Officer, Rampton State Institution, Retford, Notts.
1922. Graham, Gilbert Malise, M.B., Ch.B.Edin., Assistant Medical Officer, Derby Borough Mental Hospital, Rowditch.
1922. Graham, Malcolm Frank Douglass, B.A., M.D.Toronto, M.C.P.&S. Ontario, Specialist at Neurological Clinic, Ministry of Pensions, Brighton; 3, Whitehall Place, London, S.W. 1.
1914. Graham, Norman Bell, M.C., B.A., R.U.I., M.B., B.Ch.Belf., D.P.M. Camb., Senior Assistant Medical Officer, Purdysburn Villa Colony, Belfast.
1894. Graham, Samuel, L.R.C.P.Lond., Resident Medical Superintendent, District Asylum, Antrim.
1918. Graham, Samuel John, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Resident Medical Superintendent, Villa Colony Asylum, Purdysburn, Belfast.
1908. Graham, William Shepherd, M.B., B.Ch.R.U.I., Senior Assistant Medical Officer, Somerset and Bath Asylum, Cotford, near Taunton.
1921. Grant, Alastair Robertson, M.B., Ch.B.Aberd., Assistant Medical Officer, County Mental Hospital, Whittingham, Preston.
1915. Graves, T. Chivers, B.Sc., M.D., B.S.Lond., F.R.C.S.Eng., Medical Superintendent, Rubery Hill Mental Hospital, nr. Birmingham.
1916. Gray, Cyril, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Senior Assistant Medical Officer, Newcastle City Mental Hospital, Gosforth.
1921. Gray, Joseph Anthony Wenceslaus Pereira, M.D.Bru., M.R.C.S., L.R.C.P.Lond., Visitor of Licensed Houses under Lunacy and Mental Deficiency Acts; 3, Northernhay Place, Exeter.
1909. Greene, Thomas Adrian, L.R.C.S.&P.Irel., J.P., Medical Superintendent, District Asylum, Carlow.
1922. Gregorson, Albert William, M.D., Ch.B., F.R.F.P.&S.Glasg., Assistant Physician and Deputy Superintendent, North Middlesex Hospital, Silver Street, Upper Edmonton, N. 18; 9, Aubrey Crescent, Largs, Ayrshire.
1901. Grills, Galbraith Hamilton, M.D., B.Ch., D.M.D.R.U.I., M.P.C., Medical Superintendent, County Mental Hospital, Upton, Chester.
1916. Grimby, Alan F., M.A., M.D., B.Ch.Dubl., Assistant Medical Officer, Essex County Mental Hospital, Colchester.
1923. Grossman, Simon, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Cardiff City Mental Hospital, Whitchurch, Glam.
1894. Gwynn, Charles Henry, M.D., C.M.Edin., M.R.C.S.Eng., co-Licensee, St. Mary's House, Whitchurch, Salop.
1922. Guppy, Francis Henry, M.C., M.R.C.S., L.R.C.P., D.P.M.Lond., Deputy Medical Superintendent, Brighton County Mental Hospital, Haywards Heath, Sussex.

1894. Halsted, Harold Cecil, M.D.Durh., M.R.C.S., L.R.C.P., L.S.A.Lond., Manor Road, Selsey, Sussex.
1920. Hancock, Allen Coulter, M.C., M.R.C.S., L.R.C.P.Lond., D.P.H., D.P.M., Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.
1923. Hardcastle, Douglas Noël, M.R.C.S., L.R.C.P.Lond., D.P.M., Physician to London Neurological Clinic, "Elmcroft," Aldenham Road, Bushey, Herts.
1920. Harding, Edward Palmer, L.R.C.P.&S.Irel., Deputy Medical Superintendent, East Riding Mental Hospital, Beverley, Yorks.
1920. Harper, R. Sydney, M.R.C.S., L.R.C.P.Lond., F.R.M.S., Neurologist, Psycho-Therapeutic Clinic, Ministry of Pensions, Brighton; 4, Adelaide Crescent, Hove, Sussex.
1904. Harper-Smith, George Hastie, M.A., M.D.Camb., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Brighton County Mental Hospital, Haywards Heath; Fir Cottage, Hayward's Heath, Sussex.
1898. Harris-Liston, Llewellyn, M.D.Bru., M.R.C.S., L.R.C.P., L.S.A.Lond., F.R.I.P.H., Middleton Hall, Middleton St. George, Co. Durham.
1905. Hart, Bernard, M.D.Lond., M.R.C.S., M.R.C.P.Lond., 94, Harley Street, London, W. 1. (Lect. on Ment. Dis., Univ. Coll. Hosp.)
1886. Harvey, Bagenal Crosbie, L.R.C.P.&S.Edin., L.A.H.Dubl., Resident Medical Superintendent, District Asylum, Clonmel, Ireland.
1892. Haslett, William John H., M.R.C.S., L.R.C.P.Lond., M.P.C., Resident Medical Superintendent, Halliford House, Upper Halliford, Shepperton.
1922. Hay, Jane Elizabeth, M.B., Ch.B., D.P.H.Edin., Assistant Medical Officer, Storches Hall Asylum, Kirkburton, near Huddersfield.
1890. Hay, J. F. S., M.B., C.M.Aberd., J.P., Inspector-General of Asylums for New Zealand, Government Buildings, Wellington, New Zealand.
1923. Hayes, Edmund Duncan Tranchell, B.A., M.D., B.Ch.Dubl., D.P.M., Assistant Medical Officer, Croydon Mental Hospital, Warlingham Park, Upper Warlingham.
1900. Haynes, Horace Eyres, V.D., M.R.C.S.Eng., L.S.A., J.P., Littleton Hall, Brentwood, Essex.
1920. Haynes, Horace Guy Lankester, M.R.C.S., L.R.C.P.Lond., Littleton Hall, Brentwood, Essex.
1920. Heal, James Gordon Freeman, M.D., C.M., Dalhousie, L.M.S., N. Scotia, Guysborough, Nova Scotia, Canada.
1911. Heffernan, Patrick, B.A., M.B., B.Ch.C.U.I., Rangemoor, Bakewell, Derby.
1920. Henderson, Cyril John, M.B.Durh., F.R.I.P.H., Assistant Medical Officer, The Royal Albert Institution, Lancaster.
1916. Henderson, David Kennedy, M.D., Ch.B.Edin., F.R.F.P.&S.Glasg., Physician Superintendent, Royal Asylum, Gartnavel; 17, Whittingham Drive, Kelvinside, Glasgow. (Lect. on Psychological Medicine, Univ. of Glasgow.)
1905. Henderson, George, M.A., M.B., Ch.B.Edin., 25, Commercial Road, Peckham, London, S.E. 15.
1923. Henderson, John McAskill, M.A., B.Sc., M.B., Ch.B.Edin., Assistant Physician, Craig House, Morningside, Edinburgh.
1923. Henderson, Norman Keane, B.A., LL.B.Edin., M.B., Ch.B.Camb., D.P.H., Assistant Medical Officer, County Mental Hospital, Lancaster.
1923. Hennessy, James Alphonsus, M.B., Ch.B.Edin., Assistant Medical Officer, County Mental Hospital, Mickleover, Derby.
1877. Hewson, Robert William, L.R.C.P.&S.Edin., Medical Superintendent, Coton Hill Mental Hospital, Stafford.
1914. Hewson, Robert W. Dale, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Milner's Hostel, Marshallis Park, Romford, Essex.
1912. Higson, William Davies, M.B., Ch.B.Liverp., D.P.H., Medical Officer, H.M. Prison; 21, Walton Park, Liverpool.
1882. Hill, H. Gardiner, M.R.C.S.Eng., L.S.A., Pentillie, Leopold Road, Wimbledon Park, London, S.W. 19.

1909. Hodgson, Harold West, M.C., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Essex County Mental Hospital, Colchester.
1900. Hollander, Bernard, M.D.Freib., M.R.C.S., L.R.C.P.Lond., 57, Wimpole Street, London, W. 1.
1920. Hooper, Reginald Arthur, M.B.Durh., B.S.Newc., Senior Assistant Medical Officer, North Riding Mental Hospital, Clifton, Yorks.
1903. Hopkins, Charles Leighton, B.A., M.B., B.Ch.Camb., Medical Superintendent, York City Asylum, Fulford, York.
1914. Horne, Laura Katherine, M.B., Ch.B.Edin., Poole, Dorset.
1918. Horton, Wilfred Winnall, M.D., C.M.Edin., Medical Superintendent, Wye House, Buxton.
1894. Hotchkis, Robert Dunmore, M.A.Glasg., M.D., B.S.Durh., M.R.C.S., L.R.C.P.Lond., M.P.C., Renfrew District Asylum, Dykebar, Paisley, N.B.
1912. Hughes, Frank Percival, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., The Grove, Pinner, Middlesex.
1900. Hughes, Percy T., M.B., C.M.Edin., D.P.H., Medical Superintendent, Worcestershire County Mental Hospital, Barnesley Hall, Bromsgrove. (Lect. on Ment. Dis., Univ. of Birmingham.)
1904. Hughes, William Stanley, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Salop County Mental Hospital, Bicton Heath, Shrewsbury.
1897. Hunter, David, M.A., M.B., B.Ch.Camb., L.S.A., Medical Superintendent, The Coppice, Nottingham. (*Secretary for S.E. Division, 1910-1913.*)
1912. Hunter, George Yeates Cobb, I.M.S., M.R.C.S., L.R.C.P.Lond., M.P.C., c/o Messrs. Grindlay & Co., 54, Parliament Street, London, S.W. 1.
1904. Hunter, Percy Douglas, M.R.C.S., L.R.C.P., D.P.M.Lond., Deputy Medico-Superintendent, Three Counties Mental Hospital, Arlesey, Beds.
1911. Hutton, Isabel Emslie, M.D., Ch.B.Edin., 53, New Cavendish Street, London, W. 1.
1888. Hyslop, Theo. Bulkeley, M.D., C.M., M.R.C.P., L.R.C.S., F.R.S.Edin., M.P.C., 5, Portland Place, London, W. 1.
1915. Ingall, Frank Ernest, F.R.C.S.Eng., L.R.C.P.Lond., D.P.H., Public Health Offices, Clarence Street, Southend-on-Sea.
1908. Inglis, James Pringle Park, M.D., Ch.B.Edin., Senior Assistant Medical Officer, Leavesden Mental Hospital, King's Langley, Herts.
1906. Irwin, Peter Joseph, L.R.C.P.&S.Irel., Medical Superintendent, District Asylum, Limerick.
1923. Jack, Victor William, M.B., Ch.B.Edin., Senior Assistant Medical Officer, Stirling District Mental Hospital, Larbert.
1920. Jackson, John Luke, M.B., B.Ch.Belf., Medical Superintendent, Hants County Mental Hospital, Knowle, Fareham.
1914. James, George William Blomfield, M.C., M.D., B.S.Lond., L.S.A., D.P.M., Moorcroft Cottage, Hillingdon, Uxbridge.
1921. Jardine, Maurice Kirkpatrick, M.B., Ch.B.Edin., The Infirmary, Shirley Warren, Southampton.
1922. Jarrett, R. F., L.M.S.S.A.Lond., F.R.F.P.&S.Glasg., Senior Assistant Medical Officer, Hospital for the Insane, Claremont, N. Perth, Western Australia.
1908. Jeffrey, Geo. Rutherford, M.D., Ch.B.Glasg., F.R.C.P.Edin., M.P.C., F.R.S.Edin., Medical Superintendent, Bootham Park, York.
1893. Johnston, Gerald Herbert, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Brooke House, Upper Clapton, London, E. 5.
1905. Johnston, Thomas Leonard, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg. 5, Clifton Lawn, Ramsgate.
1912. Johnstone, Emma May, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., M.P.C., D.P.M.Camb., University Club for Ladies, 2, Audley Square, W. 1.
1878. Johnstone, J. Carlyle, M.D., C.M.Glasg., Norbury House, Droitwich.
1903. Johnstone, Thomas, M.D., C.M.Edin., M.R.C.P.Lond., 6, Victoria Avenue, Harrogate.

1879. Kay, Walter Smith, M.D., C.M.Edin., M.R.C.S.Eng., Granby Hotel, Harrogate.
1886. Keay, John, C.B.E., M.D., C.M.Glasg., F.R.C.P.Edin. Medical Superintendent, Bangour Village, Uphall, Linlithgowshire. (PRESIDENT 1918.) (Lect. on Ment. Dis., Sch. of Med., Roy. Coll. Edinburgh.)
1909. Keith, William Brooks, M.C., M.D., Ch.B.Aberd., M.P.C., Deputy Medical Superintendent, Surrey County Mental Hospital, Brookwood; The Orchard, Knaphill, Surrey. (Secretary Parliamentary Committee from 1921.)
1907. Keene, George Henry, M.D., B.Ch.Dubl., 14, Palmerston Park, Dublin.
1899. Kennedy, Hugh T. J., L.R.C.P.&S.Irel., Medical Superintendent, Enniscorthy District Asylum, Wexford.
1922. Kernohan, James Watson, B.Sc., M.B., B.Ch., D.P.H.Belf., Springhill, Cullybrackey, co. Antrim.
1897. Kerr, Hugh, M.A., M.D.Glasg., Medical Superintendent, Bucks County Mental Hospital, Stone, Aylesbury, Bucks.
1902. Kerr, Neil Thomson, M.B., C.M.Edin., J.P., Medical Superintendent, Lanark District Asylum, Hartwood, Lanarkshire.
1920. Key, Gordon James, M.B., Ch.B.Aberd., Assistant Physician, Mental Hospital, Pretoria, Transvaal, South Africa.
1897. Kidd, Harold Andrew, C.B.E., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Graylingwell Mental Hospital, Chichester.
1923. Kiddle, Frederick, C.M.G., B.A., M.B., B.Ch.Dubl., Assistant Medical Officer, Essex County Mental Hospital, Colchester.
1920. Kimber, William Joseph Teil, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Herts County Mental Hospital, Hill End, St. Albans.
1903. King, Frank Raymond, B.A.Camb., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Peckham House, Peckham, London, S.E.
1923. King, Isabel Falconer, M.B., Ch.B., L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., Assistant Medical Officer, Rubery Hill Mental Hospital, Birmingham.
1902. King-Turner, Arthur Charles, M.B., C.M.Edin., Medical Superintendent, The Retreat, Fairford, Gloucestershire.
1915. Kirwan, Richard R., M.B., B.Ch.R.U.I., Assistant Medical Officer, West Riding Asylum, Menston, Leeds.
1921. Kitchen, John Edward, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Assistant Medical Officer, Storthes Hall Asylum, Kirkburton, near Huddersfield.
1919. Knight, Mary Reid, M.A., M.B., Ch.B.Glasg., Assistant Medical Officer, Paisley District Asylum, Riccarton, Paisley, N.B.
1903. Kough, Edward Fitzadam, B.A., M.B., B.Ch.Dubl., c/o F. S. Bate, Esq., Bushey Wood Road, Totley Rise, Sheffield.
1898. Labey, Julius, M.R.C.S., L.R.C.P., L.S.A.Lond., Medical Superintendent, Public Asylum, Jersey.
1914. Ladell, Robert George Macdonald, M.B., Ch.B.Vict., Medical Officer, Ministry of Pensions, 395, Coventry Road, Small Heath, Birmingham.
1923. Laing, John Kidd Collier, M.B., B.S.Melb., D.P.M., Assistant Medical Officer, Colney Hatch Mental Hospital, New Southgate, N. 11.
1902. Langdon-Down, Percival L., M.A., M.B., B.Ch.Camb., Normansfield, Hampton Wick, Middlesex.
1896. Langdon-Down, Reginald L., M.A., M.B., B.Ch.Camb., M.R.C.P.Lond., Normansfield, Hampton Wick.
1919. Langton, Peregrine Stephen Brackenbury, M.B., B.S., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Royal Earlswood Institution, Redhill, Surrey.
1919. Latham, Oliver, M.B., C.M.Syd., Pathologist, Mental Hospitals Laboratory, Medical School, Newtown University, Sydney, N.S.W.
1902. Laval, Evariste, M.B., C.M.Edin., The Guildhall, Westminster, London, S.W. 1.

1898. Lavers, Norman, M.D.Brux., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Bailbrook House, Bath.
1892. Lawless, George Robert, F.R.C.S., L.R.C.P.Irel., Medical Superintendent, District Asylum, Armagh.
1870. Lawrence, Alexander, M.A., M.D., C.M.Aberd., 26, Hough Green, Chester.
1883. Layton, Henry Albert, M.R.C.S., L.R.C.P.Edin., 26, Kimbolton Road, Bedford.
1923. Lawrie, Macpherson, M.A., M.B., B.Ch.Camb., 34, Dover Street, W. 1.
1915. Leech, Henry Brougham, B.A., M.D., B.Ch.Dubl., Senior Assistant Medical Officer, County Asylum, Hatton, Warwick. (*Acting Registrar 1923.*)
1909. Leech, John Frederick Wolseley, B.A., M.D., B.Ch.Dubl., Assistant Medical Officer, Wilts County Asylum, Devizes.
1899. Leeper, Richard R., F.R.C.S., L.R.C.P.Irel., M.P.C., Medical Superintendent, St. Patrick's Hospital, Dublin. (*Hon. Sec. to the Irish Division since 1911.*)
1883. Legge, Richard J., M.D.R.U.I., L.R.C.S.Edin., 8, Bath Place, Cheltenham.
1906. Leggett, William, B.A., M.D., B.Ch.Dubl., Smithston Asylum, Greenock, Scotland.
1916. Lewis, Edward, L.R.C.P.&S.Edin., F.R.F.P.&S.Glasg., Assistant Medical Officer, Durham County Mental Hospital, Ferryhill.
1920. Lilley, George Austen, M.C., M.A., M.D.Camb., M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Hanwell Mental Hospital, Southall, Middlesex.
1908. Littelljohn, Edward Salterne, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Manor Cert. Institution, Epsom.
1921. Livesay, Arthur William Bligh, M.B., C.M., F.R.C.S.Edin., R.N., Assistant Medical Officer, Norfolk County Mental Hospital, Thorpe, nr. Norwich.
1920. Lloyd-Dodd, Edward Hamilton Howard, L.R.C.P.&S.Irel., Assistant Medical Officer, The Firs, Coulsdon Road, Caterham, Surrey.
1922. Logan, Frederick Colquhoun, M.B., Ch.B., F.R.F.P.&S.Glasg., Assistant Medical Officer, County Mental Hospital, Prestwich.
1898. Lord, John Robert, C.B.E., M.B., C.M.Edin., Medical Superintendent, Horton Mental Hospital, Epsom. (*Co-Editor of Journal since 1911; Assistant Editor of Journal, 1900-11; Secretary of the Post-Graduate Study Committee since 1920.*)
1923. Lovell, Clement, M.D., B.S.Lond., Pathologist to the Royal Court of the Bridewell and Bethlem Hospitals; The Laboratory, Bethlem Royal Hospital, Lambeth, S.E. 1.
1906. Lowry, James Arthur, M.D., B.Ch.R.U.I., Medical Superintendent, Surrey County Mental Hospital, Brookwood.
1904. Lyall, C. H. Gibson, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Senior Assistant Medical Officer, City Mental Hospital, Humberstone, Leicester.
1923. Lynch, William Joseph, M.B., B.Ch.N.U.I., Assistant Medical Officer, Cheshire County Mental Hospital, Parkside, Macclesfield.
1923. Lyon, Thomas Malcolm Murray, M.D.Edin., J.P., 46, Palmerston Place, Edinburgh.
1920. McAlister, William M., M.A., M.B., Ch.B.Edin., Assistant Physician, Royal Hospital, Morningside, Edinburgh.
1906. Macarthur, John, M.R.C.S., L.R.C.P.Lond., D.P.M., Medical Superintendent, District Mental Hospital, Bracebridge Heath, Lincoln.
1923. Macaulay, Douglas Jan Otto, M.B., Ch.B.Edin., D.P.M., Chiswick House, Chiswick, W. 4.
1880. MacBryan, Henry Crawford, L.R.C.P.&S.Edin., Kingsdown House, Box, Wilts.
1923. McCarthy, Owen Felix, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Resident Medical Superintendent, Cork District Mental Hospital, Cork.
1900. McClintock, John, L.R.C.P.&S.Edin., Resident Medical Superintendent, Grove House, Church Stretton, Salop.

1922. McCord, Robert Neal Ballagh, M.B., B.Ch.Belf., Assistant Medical Officer, Surrey County Mental Hospital, Brookwood, Woking, Surrey.
1920. McCowan, Peter Knight, M.D., Ch.B.Edin., M.R.C.P.Lond., D.P.M., Assistant Medical Officer, Cane Hill Mental Hospital, Coulsdon, Surrey.
1921. McCutcheon, Archibald Munn, M.B., Ch.B., F.R.F.P.&S.Glasg., Resident Medical Officer, Monyhull Colony, King's Heath, Birmingham.
1923. Macdonald, Colin, L.R.F.P.&S.Glasg., Medical Officer of Kilfinichen; Bunessau, Mull, Oban, N.B.
1901. MacDonald, James H., M.B., Ch.B., F.R.F.P.&S.Glasg., Medical Superintendent, Govan District Asylum, Hawkhead, Cardonald, Glasgow. (Lect. on Psychol. Med., Univ. of Glasgow.)
1884. MacDonald, P. W., M.D., C.M.Aberd., J.P., Grasmere, Radipole, Weymouth. (*First Hon. Sec. S.W. Div. 1894-1905*). (PRESIDENT, 1907-8.)
1911. MacDonald, Ranald, O.B.E., M.D., Ch.B.Edin., D.P.M., Assistant Medical Officer, Colney Hatch Mental Hospital, New Southgate, N. 11.
1905. MacDonald, William Fraser, M.B., Ch.B.Edin., M.P.C., 96, Polworth Terrace, Edinburgh.
1905. McDougall, Alan, M.D., Ch.B.Vict., M.R.C.S., L.R.C.P.Lond., Medical Director, The David Lewis Colony, Sandle Bridge, near Alderley Edge, Cheshire.
1906. McDowall, Colin Francis Frederick, M.D., B.S.Durh., Medical Superintendent, Ticehurst House, Ticehurst, Sussex.
1870. McDowall, Thomas W., M.D., L.R.C.S.Edin., "Burwood," Wadhurst, Sussex. (PRESIDENT, 1897-8.)
1895. Macfarlane, Neil M., M.D., C.M.Aberd., Principal Medical Officer, Maseru, Basutoland, South Africa.
1923. McGarvey, John, M.B., B.Ch.Belf., Senior Assistant Medical Officer, Somerset and Bath Asylum, Wells.
1922. McGeorge, Margaret Turner, M.B., Ch.B.Glasg., Assistant Medical Officer, Camberwell House, Peckham Road, S.E. 5.
1921. McGrath, Mathew Joseph, M.B., B.Ch.R.U.I., D.P.M., Deputy Medical Superintendent, West Riding Asylum, Wakefield; Northcote, Peterson Road, Wakefield, Yorks.
1902. McGregor, John, M.B., Ch.B.Edin., Senior Assistant Medical Officer, County Asylum, Bridgend, Glam.
1917. McIver, Colin, I.M.S., M.R.C.S., L.R.C.P.Lond., c/o Messrs. Grindlay & Co., Post Box 93, Bombay, India.
1921. McKail, Robert Buchanan Forbes, M.B., Ch.B.Glasg., Senior Assistant Medical Officer, "Calderstones" Certified Institution, Whalley, near Blackburn.
1914. Mackay, Magnus Ross, M.C., M.B., Ch.B.Edin., Newport Borough Mental Hospital, Caerleon, Mon.
1917. Mackay, Norman Douglas, B.Sc., M.D., Ch.B., D.P.H.St.And., Dall-Avon, Aberfeldy, Perthshire.
1891. Mackenzie, Henry James, M.B., C.M.Edin., M.P.C., Assistant Medical Officer, The Retreat, York.
1911. Mackenzie, John Cosserat, M.B., Ch.B.Edin., Assistant Medical Officer, Burntwood Mental Hospital, near Lichfield.
1903. Mackenzie, Theodore Charles, M.D., Ch.B., F.R.C.P.Edin., M.P.C., Medical Superintendent, District Asylum, Inverness.
1921. Mackie, George, D.S.O., M.D., Ch.B.Edin., Thornyhill, Burley-in-Wharfedale.
1920. McLachlan, Jessie Brown, M.B., Ch.B.Glasg., D.P.H.Camb., 13, Ferguson Place, Burntisland, Fife.
1921. Macleod, Neil, M.B., Ch.B.Edin., Assistant Physician, Royal Hospital, Morningside, Edinburgh.
1922. McLuskie, Peter, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer, Cane Hill Mental Hospital, Coulsdon, Surrey.

- 1923. MacNab, Robert Allan, M.B., Ch.B.Edin., Junior Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey.
- 1904. Macnamara, Eric Danvers, M.A., M.D., B.Ch.Camb., F.R.C.P.Lond., 87, Harley Street, London, W. 1. (Lect. on Psychol. Med., Charing Cross Hosp.)
- 1910. MacPhail, Hector Duncan, O.B.E., M.A., M.D., Ch.B.Edin., Medical Superintendent, City Mental Hospital, Gosforth, Newcastle-on-Tyne.
- 1922. Macphail, Iain Ross, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Medical Superintendent, Kesteven County Mental Hospital, Greylees, Sleaford, Lincs.
- 1882. Macphail, S. Rutherford, M.D., C.M.Edin., Linden Lodge, Loanhead, Midlothian.
- 1901. McRae, G. Douglas, M.D., C.M., F.R.C.P.Edin., J.P., Medical Superintendent, Glengall Hospital; Glengall House, Ayr, N.B. (*Co-Editor of the Journal since 1920; Assistant Editor 1916-20.*)
- 1894. McWilliam, Alexander, M.A., M.B., C.M.Aberd., Waterval, Odiham, Winchfield, Hants.
- 1922. McWilliam, William, M.B., Ch.B.Glasg., Assistant Medical Officer, District Asylum, Inverness.
- 1923. Madill, Joseph Thomas Herbert, B.A.N.U.I., M.B., B.Ch.Edin., Senior Assistant Medical Officer, County Mental Hospital, Chester.
- 1908. Mapother, Edward, M.D., B.S.Lond., F.R.C.S.Eng., M.R.C.P.Lond., Medical Superintendent, The Maudsley Hospital, Denmark Hill, S.E. 5.
- 1903. Marnan, John, B.A., M.B., B.Ch.Dubl., Medical Superintendent, County Asylum, Gloucester.
- 1896. Marr, Hamilton C., M.D., C.M., F.R.F.P.&S.Glasg., M.P.C., H.M. Commissioner, General Board of Control for Scotland (10, Succoth Avenue, Edinburgh). (*Hon. Sec. Scottish Division, 1907-1910.*)
- 1905. Marshall, Robert Macnab, M.D., Ch.B.Glasg., M.P.C., 2, Clifton Place, Glasgow.
- 1922. Martin, Frederick Robertson, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer, Long Grove Mental Hospital, Epsom, Surrey.
- 1908. Martin, Henry Cooke, M.B., Ch.B.Edin., Assistant Medical Officer, The Mental Hospital, Fort Beaufort, C.P., South Africa.
- 1896. Martin, James Charles, L.R.C.S.&P.Irel., J.P., Assistant Medical Officer, Mental Hospital, Letterkenny, Donegal.
- 1908. Martin, James Ernest, M.B., B.S., M.R.C.S., L.R.C.P., D.P.M.Lond., Deputy Medical Superintendent, Long Grove Mental Hospital, Epsom.
- 1907. Martin, Mary Edith, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., L.S.A.Lond., M.P.C., 11, The Drive, Hove, Sussex.
- 1914. Martin, Samuel Edgar, M.B., B.Ch.Edin., Barrister-at-Law, Medical Officer, The Old Manor, Salisbury.
- 1911. Martin, William Lewis, O.B.E., M.A., B.Sc., M.B., C.M., D.P.H.Edin., M.P.C., Dipl. Psych., Certifying Physician in Lunacy, Edinburgh Parish Council, 56, Bruntsfield Place, Edinburgh.
- 1922. Martyn, Pierce Patrick, M.B., B.Ch.R.U.I., Assistant Medical Officer, Kent County Mental Hospital, Maidstone.
- 1923. Marwood, Sydney Francis, M.B., B.S., M.R.C.S., M.R.C.P.Lond., Assistant Medical Officer, South Yorkshire Asylum, Sheffield.
- 1921. Masefield, William Gordon, M.R.C.S., L.R.C.P.Lond., Deputy Medical Superintendent, Essex County Mental Hospital, Colchester.
- 1911. Mathieson, James Moir, M.B., Ch.B.Aberd., Assistant Medical Officer, South Yorks Asylum, Sheffield.
- 1890. Menzies, William F., B.Sc., M.D.Edin., F.R.C.P.Lond., Medical Superintendent, Stafford County Mental Hospital, Cheddleton, near Leek. (*PRESIDENT, 1920-21.*)
- 1877. Merson, John, M.A., M.D., C.M.Aberd., Medical Superintendent, Hull City Asylum, Willerby.

1910. Middlemiss, James Ernest, M.R.C.S., L.R.C.P.Lond. F.R.F.P.&S. Glasg., M.P.C., Neurologist and Specialist in Psychotherapy, Ministry of Pensions, Leeds; 131, North Street, Leeds.
1893. Mills, John, M.B., B.Ch., D.M.D., R.U.I., Medical Superintendent, District Asylum, Ballinasloe, Ireland.
1923. Minski, Louis, M.B., B.S.Durh., Assistant Medical Officer, Bootham Park, York.
1911. Moll, Jan. Marius, Doc. in Arts and Med., Utrecht Univ., L.M.S.S.A., Lond., M.P.C., Box 2587, Johannesburg, South Africa.
1922. Molony, Charles Bernard, M.B., Ch.B., B.A.O.N.U.I., Assistant Medical Officer, Limerick Mental District Hospital, Limerick.
1910. Monnington, Richard Caldicott, M.D., Ch.B., D.P.H.Edin., D.P.M., Neurologist, Ministry of Pensions, 33, New Street, Salisbury.
1915. Monrad-Krohn, G. H., B.A., M.D., B.S.Christiania, M.R.C.S., M.R.C.P. Lond., M.P.C., Rikshospitalet, Christiania, Norway. (Prof. of Medicine, Royal Frederick University.)
1899. Moore, William D., M.D., M.Ch.R.U.I., Medical Superintendent, Holloway Sanatorium, Virginia Water, Surrey.
1917. Morris, Bedlington Howel, M.B., B.S.Durh., Inspector-General of Hospitals, South Australia; "Tros-y-Parc," Pembroke Street, St. Peter's, Adelaide, S. Australia.
1896. Morton, William Britain, M.D., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Wonford House, Exeter.
1896. Mott, Sir Frederick W., K.B.E., LL.D.Edin., M.D., B.S., F.R.C.P.Lond., F.R.S., 25, Nottingham Place, Marylebone, London, W. 1. (Lect. on Morbid Psychology, Univ. of Birmingham.)
1896. Mould, Gilbert E., M.R.C.S., L.R.C.P.Lond., The Grange, Rotherham, Yorks.
1897. Mould, Philip G., M.R.C.S., L.R.C.P.Lond., Oaklands, Walmersley, nr. Bury, Lancs.
1914. Moyes, John Murray, M.B., Ch.B.Edin., D.P.M.Leeds, Northumberland Mental Hospital, Morpeth.
1919. Mules, Annie Shortridge, M.R.C.S., L.R.C.P.Lond., House Physician, Devon and Exeter Hospital; Court Hall, Kenton, S. Devon.
1907. Mules, Bertha Mary, M.D., B.S.Durh., Court Hall, Kenton, S. Devon.
1923. Mullin, Bartholomew Joseph, L.R.C.S.&P.Irel., D.P.H., Assistant Medical Officer, Northumberland House, Green Lanes, Finsbury Park, N. 4.
1911. Muncaster, Anna Lilian, M.B., B.Ch.Edin., Valkenburg Mental Hospital, Cape Town, South Africa.
1923. Murnane, Helen, M.B., B.Ch.R.U.I., D.P.H., Assistant Medical Officer, Grangegorman District Mental Hospital, Dublin.
1919. Murnane, John, L.R.C.P.&S.Irel., Portroe, Nenagh.
1903. Navarra, Norman, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, City of London Mental Hospital, Stone, Dartford.
1910. Neill, Alex. W., M.D., Ch.B.Edin., Warneford Mental Hospital, Oxford.
1903. Nelis, William F., M.D.Durh., L.R.C.P.Edin., L.R.F.P.&S.Glasg., Medical Superintendent, Newport Borough Mental Hospital, Caerleon, Mon.
1920. Nicol, William Drew, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Hanwell Mental Hospital, Southall, Middlesex.
1923. Nicole, J. Ernest, L.M.S.S.A.Lond., Assistant Medical Officer, County Mental Hospital, Prestwich, Manchester.
1921. Nicoll, James, M.D., C.M.Edin., D.P.H.Lond., Medical Superintendent, Fountain Mental Hospital, Tooting Grove, S.W. 17.
1869. Nicolson, David, C.B., M.D., C.M.Aberd., M.R.C.P.Edin., F.S.A.Scot., Blythewood, Camberley, Surrey. (PRESIDENT, 1895-6.)
1920. Nix, Sidney, M.D., B.S.Durh., L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Deputy Medical Superintendent, Graylingwell Mental Hospital, Chichester.

1922. Noble, Ralph Athelstane, M.B., Ch.M.Syd., D.P.M.Camb., Medical Superintendent, Red Cross Hospitals for Nervous Diseases, N.S.W., Australia; "Montrose," 175, Macquarie Street, Sydney, N.S.W., Australia.
1888. Nolan, Michael J., L.R.C.P.&S.Irel., M.P.C., Medical Superintendent, District Asylum, Downpatrick. [PRESIDENT-ELECT.]
1913. Nolan, James Noël Green, B.A., M.D., B.Ch.Dubl., Deputy Medical Superintendent, East Sussex Mental Hospital, Hellingly.
1909. Norman, Hubert James, M.B., Ch.B., D.P.H.Edin., Assistant Medical Officer, Camberwell House Asylum, Peckham Road, London, S.E. 5; 51, Crystal Palace Park Road, Sydenham, London, S.E. 26.
1923. Noronha, Frank, M.B., C.M.Madras, D.P.M., Superintendent, The Asylum, Avenue Road, Bangalore City, India.
1923. O'Brien, Mary C., L.R.C.P.&S.Irel., Assistant Medical Officer, Ballinasloe Mental Hospital, Galway.
1903. O'Doherty, Patrick, B.A., M.B., B.Ch.R.U.I., Resident Medical Superintendent, District Mental Hospital, Sligo.
1918. Ogilvie, William Mitchell, M.B., C.M.Aberd., Medical Superintendent, Ipswich Mental Hospital, Ipswich.
1901. Ogilvy, David, B.A., M.D., B.Ch.Dubl., Medical Superintendent, London County Mental Hospital, Long Grove, Epsom.
1911. Oliver, Norman Henry, M.R.C.S., L.R.C.P.Lond., Barrister-at-Law, Officer in Charge, No. 4 Special Hospital for Officers, Latchmere, Ham Common, Surrey.
1922. O'Flaherty, Rev. Claude, M.B., Ch.B.Edin., 29, Palmerston Place, Edinburgh.
1892. O'Mara, Francis, L.R.C.P.&S.Irel., Resident Medical Superintendent, District Asylum, Ennis, Ireland.
1920. O'Neill, Arthur, O.B.E., M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Napsbury Mental Hospital, nr. St. Albans, Herts.
1902. Orr, David, M.D., C.M.Edin., M.P.C., Deputy Medical Superintendent, County Mental Hospital, Prestwich.
1910. Orr, James H. C., M.D., Ch.B.Edin., Midlothian Asylum, Rosslyn Castle.
1914. Osburne, John C., M.B., B.Ch.N.U.I., c/o Glyn, Mills, Currie, Holt & Co., 3, Whitehall Place, S.W. 1.
1890. Oswald, Landel R., M.B., C.M.Glasg., M.P.C., c/o The Manse, Thornhill, Dumfriesshire. (Lect. on Ins., Univ. of Glasgow.)
1916. Overbeck-Wright, Alexander William, M.D., Ch.B.Aberd., M.P.C., D.P.H., I.M.S., Superintendent, Asylum House, Agra, U.P., India. Address: c/o Messrs. King, King & Co., Bombay, India.
1905. Paine, Frederick, M.D.Bru., M.R.C.S., M.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, Claybury Mental Hospital, Woodford Bridge, Essex.
1923. Pailthorpe, Grace Winifred, M.B., B.S.Durh., 44, Parliament Hill Mansions, Highgate Road, N.W. 5.
1898. Parker, William Arnot, M.B., C.M.Glasg., M.P.C., Medical Superintendent, Gartloch Mental Hospital, Gartcosh, N.B.
1920. Parkin, George Gray, M.B., Ch.B.Vict., Deputy Medical Superintendent, Cheshire County Mental Hospital, Parkside, Macclesfield.
1920. Parnis, Henry William, B.Sc., M.D.Malta, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
1898. Pasmore, Edwin Stephen, M.D., M.R.C.P.Lond., Medical Superintendent, Croydon Mental Hospital, Chelsham House, Upper Warlingham.
1916. Patch, Charles James Lodge, M.C., L.R.C.P.&S.Edin., L.R.F.P.&S. Glasg., Capt. I.M.S., The Punjab Lunatic Asylum, Lahore, India.
1899. Patrick, John, M.B., Ch.B.R.U.I., Medical Superintendent, District Asylum, Omagh, Ireland.
1907. Peachell, George Ernest, M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond., M.P.C., Medical Superintendent, Dorset County Mental Hospital, Herrison, Dorchester.

1910. Pearn, Oscar Phillips Napier, M.R.C.S., L.R.C.P., L.S.A.Lond., D.P.M., Deputy Medical Superintendent, Cane Hill Mental Hospital, Coulsdon, Surrey.
1915. Pennant, Dyfrig Huws, D.S.O., M.R.C.S., L.R.C.P.Lond., Pendyre, Saundersfoot, Pembrokeshire.
1913. Penny, Robert Augustus Greenwood, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Devon County Mental Hospital, Exminster.
1920. Penson, John Frederick, M.A., M.B., B.Ch.Oxon., M.R.C.S., L.R.C.P.Lond., D.P.M., Clanfield, Alexander Road, Reading.
1911. Petrie, Alfred Alexander Webster, M.D., M.R.C.P.Lond., D.P.M., Deputy Medical Superintendent, Maudsley Hospital, Denmark Hill, London, S.E. 5.
1878. Phillips, Sutherland Rees, M.D., C.M.Q.U.I., F.R.G.S., Mont Estoril, Belle Vue Road, Paignton.
1908. Phillips, John George Porter, M.D., B.S.Lond., M.R.C.S., F.R.C.P.Lond., M.P.C., Resident Physician and Superintendent, Bethlem Royal Hospital, Lambeth, London, S.E. 1. (Lect. on Ment. Path., London School of Med for Women.) (*Secretary of Educational Committee*, 1913-20.)
1910. Phillips, John Robert Parry, O.B.E., M.R.C.S., L.R.C.P.Lond., Northwoods House, Winterbourne, Bristol.
1906. Phillips, Nathaniel Richard, M.D.Bru.x., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Monmouthshire County Asylum, Abergavenny.
1905. Phillips, Norman Routh, M.D.Bru.x., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, St. Andrew's Hospital, Northampton.
1921. Phillips, Philip Gordon, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Medical Superintendent, Ministry of Pensions Neurological Hospital, Oulton Hall, Woodlesford, near Leeds.
1891. Pierce, Bedford, M.D., F.R.C.P.Lond., "Rosewood," Middlecave Road, Malton, Yorks. (*Hon. Secretary, N. and M. Division*, 1900-8.) (PRESIDENT, 1919.)
1888. Pietersen, James F. G., M.R.C.S., L.R.C.P.Lond., Ashwood House, Kingswinford, near Dudley, Stafford.
1896. Planck, Charles, M.A.Camb., M.R.C.S., L.R.C.P.Lond., "Pontresina," Perrymount Road, Haywards Heath.
1912. Plummer, Edgar Curnow, M.R.C.S., L.R.C.P.Lond., St. Faith's, Mount Park Road, Ealing, W. 5.
1889. Pope, George Stevens, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Heigham Hall, Norwich.
1913. Potts, William A., M.A.Camb., M.D.Edin.& Birm., M.R.C.S., L.R.C.P.Lond., *Medical Officer to the Birmingham Committee for the Care of the Feeble-minded*, 118, Hagley Road, Birmingham.
1910. Powell, James Farquharson, M.C., M.R.C.S., L.R.C.P., D.P.H.Lond., D.P.M., M.P.C., 8, Boscobel Road, St. Leonards-on-Sea.
1916. Power, Patrick William, L.R.C.P.&S.Irel., Senior Assistant Medical Officer, Upton County Mental Hospital, Upton, Chester.
1923. Power, Thomas Declan, B.A., M.D., B.Ch.Dubl., D.P.H., D.P.M., Assistant Medical Officer, Essex County Mental Hospital, Brentwood, Essex.
1921. Poynder, Ernest George Thornton, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Long Grove Mental Hospital, Epsom.
1908. Prentice, Reginald Wickham, L.M.S.S.A.Lond., Bridge House, Ringwood, Hants.
1918. Prideaux, John Joseph Francis Engledue, M.R.C.S., L.R.C.P.Lond., D.C.M.S. Ministry of Pensions, 1, Sanctuary Buildings, Great Smith Street, S.W. 1.
1894. Rambaut, Daniel F., M.A., M.D., B.Ch.Dubl., Medical Superintendent, St. Andrew's Hospital, Northampton; Priory Cottage, Northampton.

1889. Raw, Nathan, C.M.G., M.D., B.S., L.S.Sc.Durh., F.R.C.S.Edin., M.R.C.P.Lond., M.P.C., Lord Chancellor's Visitor.
1870. Rayner, Henry, M.D.Aberd., M.R.C.P.Edin., Upper Terrace House, Hampstead, London, N.W. 3. (PRESIDENT, 1884-85.) (*General Secretary*, 1877-89.) (*Co-Editor of Journal*, 1895-1911.)
1913. Read, Charles Stanford, M.D., M.R.C.S., L.R.C.P.Lond., 11, Weymouth Street, London, W. 1.
1920. Read, Walter Wolfe, M.D.Bruz., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Berkshire County Mental Hospital, Wallingford, Berks.
1921. Reardon, Arthur Francis, L.M.S.S.A.Lond., Medical Superintendent, County Mental Hospital, Cambridge.
1899. Redington, John Murray, F.R.C.S., L.R.C.P.Irel., "Revagh," Salthill, Galway.
1911. Reeve, Ernest Frederick, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, County Mental Hospital, Rainhill.
1911. Reid, Daniel McKinley, M.D., Ch.B., F.R.F.P.&S.Glasg., Medical Superintendent, City Mental Hospital, Exeter.
1910. Reid, William, M.A.St.And., M.B., Ch.B.Edin., Senior Assistant Medical Officer, Burntwood Mental Hospital, near Lichfield.
1923. Retallack-Moloney, Herbert Thomas, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.
1899. Rice, David, M.D.Bruz., M.R.C.S., L.R.C.P.Lond., D.P.H., Medical Superintendent, City Mental Hospital, Hillesdon, Norwich.
1897. Richards, William J., M.A., M.B., C.M., F.R.F.P.&S.Glasg., Merryflats, Govan, Glasgow.
1899. Richards, John, M.B., C.M., F.R.C.S.Edin., Medical Superintendent, Joint Counties Mental Hospital, Carmarthen.
1922. Riches, Reginald George, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Horton Mental Hospital, Epsom.
1920. Rickman, John, M.A., M.B., B.Ch.Camb., 11, Kent Terrace, London, N.W. 1.
1911. Robarts, Henry Howard, M.D., Ch.B.Edin., D.P.H.Glasg., Ennerdale, Haddington, Scotland.
1922. Robb, John Robert Beith, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Senior Assistant Medical Officer, Gartloch Mental Hospital, Gartcosh, N.B.
1921. Roberts, Edward Douglas Thomas, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Herts County Mental Hospital, Hill End, St. Albans.
1903. Roberts, Norcliffe, O.B.E., M.D., B.S.Durh., D.P.M., Medical Superintendent, West Park Mental Hospital, Epsom, Surrey.
1887. Robertson, Geo. M., M.D., C.M., F.R.C.P.Edin., M.P.C., Physician-Superintendent, Royal Hospital, Morningside, Edinburgh; Tipperlin House, Morningside Place, Edinburgh. (Prof. of Psychiatry, Univ. of Edinburgh.) (PRESIDENT, 1922-23.)
1908. Robertson, George Dunlop, L.R.C.S.&P.Edin., L.R.F.P.&S.Glasg., Dipl. Psych., Assistant Medical Officer, District Asylum, Hartwood, Lanark.
1900. Robinson, Harry Armitage, M.D., Ch.B.Vict., Arlunfa, Victoria Drive, Llandudno Junction.
1920. Robinson, William, M.D., Ch.B., D.P.M.Leeds, Medical Superintendent, Essex County Mental Hospital, Brentwood.
1911. Robson, Capt. Hubert Alan Hirst, M.R.C.S., L.R.C.P.Lond., Punjaub Asylum, India.
1923. Rodd, Arthur, M.R.C.S., L.R.C.P.Lond., Capt. R.A.M.C., Mulfra, Yelverton, Devon, c/o Messrs. Glyn, Mills, Currie, Holt & Co., 3, Whitehall Place, S.W. 1.
1922. Rodger, Kenneth Mann, M.B., Ch.B.Glasg., D.P.M., Assistant Medical Officer, West Riding Asylum, Menston.
1914. Rodger, Murdoch Mann, M.D., Ch.B.Glasg. (The Anchorage, Bothwell, Scotland); Lunatic Asylum, Abbassia, Cairo, Egypt.

1908. Rodgers, Frederick Millar, *O.B.E.*, M.D., Ch.B.Vict., D.P.H., Deputy Medical Superintendent, County Mental Hospital, Winwick.
1895. Rolleston, Lancelot William, *C.B.E.*, M.B., B.S.Durh., Medical Superintendent, Napsbury Mental Hospital, nr. St. Albans, Herts.
1922. Rollins, Ernest Edward, B.A., M.B., B.Ch.Dubl., Assistant Medical Officer, Graylingwell Mental Hospital, Chichester.
1920. Roscrow, Cecil Beaumont, L.R.C.P.&S.Edin., Medical Superintendent, City Mental Hospital, Winson Green, Birmingham.
1888. Ross, Chisholm, M.D.Syd., M.B., C.M.Edin., 225, Macquarie Street, Sydney, New South Wales.
1910. Ross, Donald, M.B., Ch.B.Edin., M.P.C., Medical Superintendent, Argyll and Bute Asylum; Tigh-ma-Linne, Lochgilphead, Argyll.
1923. Ross, Thomas Arthur, M.D., C.M., F.R.C.P.Edin., Medical Director, Cassel Hospital for Functional Nervous Disorders, Swaylands, Penshurst, Kent.
1899. Rotherham, Arthur, M.A., M.B., B.Ch.Camb., Commissioner, Board of Control, 66, Victoria Street, Westminster, London, S.W. 1; Elm House, Marshall Row, Farncombe, Surrey.
1902. Rows, Richard Gundry, *C.B.E.*, M.D.Lond., M.R.C.S., L.R.C.P.Lond., Ministry of Pensions Hospital, Richmond.
1922. Roy, John Allen Chisholm, M.B., Ch.B., Medical Superintendent, Cheadle Royal, Cheadle, Cheshire.
1877. Russell, Arthur Pickston, M.B., C.M., M.R.C.P.Edin., Medical Superintendent, The Lawn, Lincoln.
1923. Russell, John, M.B., Ch.B.Glasg., Junior Assistant Medical Officer, Stirling District Mental Hospital, Larbert, Scotland.
1912. Russell, John Ivison, M.B., Ch.B., F.R.F.P.&S.Glasg., D.P.M., M.P.C., Deputy Medical Superintendent, North Riding Asylum, Clifton.
1915. Russell, William, M.C., M.D., Ch.B., Dip.Psych., D.T.M.Edin., Physician Superintendent, Training School, Potchefstroom, South Africa.
1912. Rutherford, Cecil, B.A., M.B., B.Ch.Dubl., Assistant Medical Officer, Holloway Sanatorium, Virginia Water, Surrey.
1907. Rutherford, Henry Richard Charles, F.R.C.S., L.R.C.P.Irel., D.P.H., St. Patrick's Hospital, James's St., Dublin.
1896. Rutherford, James Mair, M.B., C.M., F.R.C.P.Edin., M.P.C., Brislington House, Bristol.
1922. Ruthven, Morton Wood, M.B., Ch.B.Edin., D.T.M.Liverp., Assistant Medical Officer, Banstead Mental Hospital, Sutton, Surrey.
1902. Sall, Ernest Frederick, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, City Mental Hospital, Canterbury.
1908. Samuels, William Frederick, L.M.&S.Dubl., Medical Superintendent, Central Asylum, S. Dymphna's, Tanjong, Rambutan, F.M.S.
1923. Sang, Janet Adeline Agnes, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Assistant Medical Officer, County Mental Hospital, Prestwich, Manchester.
1894. Sankey, Edward H. O., M.A., M.B., B.Ch.Camb., Resident Medical Licensee, Boreatton Park Licensed House, Baschurch, Salop.
1906. Scanlan, John J., L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., D.P.H., c/o Glyn, Mills, Currie, Holt & Co., 44, Charing Cross, S.W. 1.
1889. Scowcroft, Walter, M.R.C.S.Eng., L.R.C.P.Irel., St. Ann's Cottage, St. Ann's Road, Cheadle.
1911. Scroope, Gervase, W. M., M.B., B.Ch.Dubl., Assistant Medical Officer, Central Asylum, Dundrum, co. Dublin.
1880. Seccombe, George S., M.R.C.S., L.R.C.P.Lond., c/o Messrs. H. S. King & Co., 65, Cornhill, London, E.C. 3.
1912. Sergeant, John Noel, M.B., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Newlands House, Tooting Bec Common, London, S.W. 17. (*Secretary South-Eastern Division since 1913.*)
1921. Severn, Adolphe Gladstone Millott, B.A., M.D.Brux., M.R.C.S., L.R.C.P.Lond., D.P.H., F.C.S., F.R.I.P.H., 68, West Street, Brighton, Sussex.

1913. Shand, George Ernest, M.D., Ch.B.Aberd., D.P.H. (Senior Assistant Medical Officer, City Mental Hospital, Winson Green, Birmingham). *Permanent address*: 307, Gillott Road, Edgbaston, Birmingham.
1901. Shaw, B. Henry, M.D., B.Ch.R.U.I., Medical Superintendent, County Mental Hospital, Stafford.
1905. Shaw, Charles John, M.D., Ch.B., F.R.C.P.Edin., J.P., Medical Superintendent, Royal Asylum, Montrose.
1917. Shaw, John Custance, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, West Ham Borough Mental Hospital, Goodmayes, Essex.
1904. Shaw, Patrick, L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., Medical Superintendent, Hospital for Insane, Ballarat, Victoria, Australia.
1909. Shaw, William Samuel J., Major I.M.S., M.D.Belf., M.B., B.Ch.R.U.I., c/o Messrs. Grindlay & Co., 54, Parliament Street, S.W. 1.
1920. Shearer, Christina Hamilton, M.B., Ch.B.Glasg., Senior Medical Officer, Cassel's Hospital, Swaylands, Penshurst, Kent.
1923. Shepherd, Charles Ernest Alan, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Long Grove Mental Hospital, Epsom, Surrey.
1909. Shepherd, George Ferguson, F.R.C.S., L.R.C.P.Irel., D.P.H., 9, Ogle Terrace, South Shields.
1900. Shera, John Egar Percival, M.D.Bru., L.R.C.P.&S.Irel., Medical Superintendent, Somerset County Asylum, Wells, Somerset.
1914. Sherlock, Edward Birchall, B.Sc., M.D., D.P.H.Lond., Barrister-at-Law, Medical Superintendent, Darenth Industrial Colony, Dartford.
1914. Shield, Hubert, M.C., M.B., B.S.Durh., Assistant Medical Officer, Gateshead Mental Hospital; 73, Holly Avenue, Jesmond, Newcastle-on-Tyne.
1923. Shore, G. W., M.D.Lond., D.P.H.Camb., D.P.M., Assistant Medical Officer, Springfield Mental Hospital, Tooting, London, S.W. 17.
1922. Shortt, Jane Elder, M.B., Ch.B.Glasg., Assistant Medical Officer, The Lawn, Lincoln.
1877. Shuttleworth, George E., B.A.Lond., M.D.Heidelb., M.R.C.S. and L.S.A.Lond., 36, Lambolle Road, Hampstead, London, N.W. 3.
1901. Simpson, Alexander, C.B.E., M.A., M.D., C.M.Aberd., Medical Superintendent, County Mental Hospital, Winwick.
1905. Simpson, Edward Swan, M.C., M.D., Ch.B.Edin., Medical Superintendent, East Riding Mental Hospital, Beverley, Yorks.
1888. Sinclair, Eric, M.D., C.M.Glasg., Inspector-General of Insane, Richmond Terrace, Demain, Sydney, N.S.W.
1891. Skeen, James Humphry, M.B., C.M.Aberd., M.P.C., Medical Superintendent, Fife and Kinross District Asylum, Cupar, N.B.
1921. Skene, Leslie Henderson, M.C., M.B., Ch.B., Dipl.Psych.Edin., Mental Hospital, Douglas, Isle of Man.
1914. Slaney, Chas. Newnham, M.R.C.S., L.R.C.P.Lond., Medical Officer, H.M. Prison; The Elms, Parkhurst, I.W.
1901. Slater, George Nathan Oscroft, M.D.Lond., M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Essex County Mental Hospital, Brentwood.
1910. Smith, Gayton Warwick, M.D.Lond., B.S.Durh., M.R.C.S., L.R.C.P.Lond., D.P.H., Senior Assistant Medical Officer, Springfield Mental Hospital, Tooting, London, S.W. 17.
1905. Smith, George William, M.B., Ch.B.Edin., Wyke House, Isleworth, Middlesex.
1907. Smith, Henry Watson, O.B.E., M.D., Ch.B.Aberd., Director, Lebanon Hospital, Asfuriyeh, nr. Beyrout, Syria.
1923. Smith, Herbert, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Dorset Mental Hospital, Herrison, Dorchester.
1899. Smith, John G., M.D., C.M.Edin., Medical Superintendent, County and City Mental Hospital, Burghill, nr. Hereford.
1920. Smith, Maurice Hamblin, M.A.Camb., M.D.Durh., M.R.C.S., L.R.C.P.Lond., H.M. Prison, Birmingham. (Lecturer on Criminology, Univ. of Birmingham.)

Members of the Association.

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1885. Smith, R. Percy, M.D., B.S., F.R.C.P.Lond., M.P.C., 36, Queen Anne Street, Cavendish Square, London, W. 1. (*General Secretary, 1896-7. Chairman Educational Committee, 1899-1903.*) (PRESIDENT, 1904-5.)
1913. Smith, Thomas Cyril, M.B., B.Ch.Edin., Assistant Medical Officer (2nd), County Asylum, Gloucester.
1911. Smith, Thomas Waddelow, F.R.C.S.Eng., L.R.C.P.Lond., A.S.A., M.P.C., Senior Assistant Medical Officer, City Asylum, Nottingham.
1884. Smith, W. Beattie, F.R.C.S., L.R.C.P.Edin., 4, Collins Street, Melbourne, Victoria.
1914. Smith, Walter Richard Hugh, B.A., M.D., B.Ch.Dubl., Senior Assistant Medical Officer, Salop County Mental Hospital, Bicton Heath, Shrewsbury.
1920. Smyth, Geoffrey Norman, L.R.C.P.&S.Irel., Assistant Medical Officer, St. Patrick's Hospital; 7, Dartmouth Square, Leeson Park, Dublin.
1921. Smyth, John Francis, M.B., B.Ch., N.U.I., Assistant Medical Officer, Mental Hospital, Morpeth, Northumberland.
1899. Smyth, Walter Samuel, M.B., B.Ch.R.U.I., Assistant Medical Superintendent, County Asylum, Antrim.
1923. Somerville, George, M.B., Ch.B.Edin., Assistant Medical Officer, Devon Mental Hospital, Exminster.
1913. Somerville, Henry, B.Sc., M.R.C.S., L.R.C.P.Lond., F.C.S., Ministry of Pensions Hospital, Shotley Bridge, Durham.
1885. Soutar, James Greig, M.B., C.M.Edin., M.P.C., 20, Royal Parade, Cheltenham. (PRESIDENT, 1912-13.)
1906. Spark, Percy Charles, M.R.C.S., L.R.C.P.Lond., Medical Superintendent, London County Mental Hospital, Banstead, Surrey.
1875. Spence, J. Beveridge, O.B.E., M.D., M.Ch.Q.U.I., L.A.H.Dubl., Medical Superintendent, Burntwood Mental Hospital, near Lichfield. (*First Registrar, 1892-1899; Chairman Parliamentary Committee, 1910-12.*) (PRESIDENT, 1899-1900.)
1922. Spence, Thomas Reginald Carwardine, M.B., Ch.B.Edin., Medical Superintendent, Kesteven County Asylum, Sleaford, Lincs.
1920. Staley, Mildred Ernestine, M.B., B.S.Lond., Colonial Medical Service, Suva, Fiji, West Pacific.
1891. Stansfield, T. E. K., C.B.E., M.B., C.M.Edin., Southmead, Wimbledon Park, London, S.W. 19.
1901. Starkey, William, M.B., B.Ch.R.U.I., Medical Superintendent, Plymouth Mental Hospital, Blackadon, Ivybridge, S. Devon. (*Secretary South-Western Division, since 1922.*)
1907. Steele, Patrick, M.D., Ch.B., F.R.C.P.Edin., Medical Superintendent, Roxburgh District Asylum, The Hermitage, Melrose.
1898. Steen, Robert Hunter, B.A.R.U.I., M.D., F.R.C.P.Lond., Medical Superintendent, City of London Mental Hospital, Stone, Dartford. (*Hon. Sec. S.E. Division, 1905-10; Acting Gen. Sec. and Gen. Sec. 1915-19.*)
1914. Stephens, Harold Freize, M.R.C.S., L.R.C.P.Lond., The Manor Cert. Institution for Mental Defectives, Epsom, Surrey.
1909. Steward, Sidney John, D.S.O., M.D., B.Ch.Camb., M.R.C.S., L.R.C.P.Lond., D.P.H., Langton Lodge, Farncombe, Surrey.
1922. Stewart, Francis Hugh, M.A., D.Sc.St. And., M.D.Edin., County Mental Hospital, Cheddleton, Staffs.
1868. Stewart, James, B.A.Q.U.I., F.R.C.P.Edin., L.R.C.S.Irel., "Donegal," 32, Kingsmead Road, London, S.W. 2.
1887. Stewart, Rothsay C., M.R.C.S.Eng., L.S.A.Lond., Medical Superintendent, County Mental Hospital, Narborough, nr. Leicester.
1914. Stewart, Roy MacKenzie, M.D., Ch.B., M.R.C.P.Edin., D.P.M., Medical Superintendent, Leavesden Mental Hospital; Woodside, Leavesden, Watford.
1905. Stilwell, Henry Francis, L.R.C.P.&S.Edin., I.R.F.P.&S.Glasg., Hayes Park, Hayes, Middlesex.

1899. Stilwell, Reginald John, M.R.C.S., L.R.C.P.Lond., Moorcroft House, Hillingdon, Middlesex.
1897. Stoddart, William Henry Butter, M.D., B.S., F.R.C.P.Lond., M.R.C.S. Eng., M.P.C., Harcourt House, Cavendish Square, London, W. 1. (*Hon. Sec. Educational Committee, 1908-1912.*) (Lect. on Ment. Dis., St. Thomas's Hosp.)
1909. Stokes, Frederick Ernest, M.D., Ch.B.Glasg., D.P.H., Senior Assistant Medical Officer, Borough Mental Hospital, Portsmouth.
1903. Stratton, Percy Houghton, M.R.C.S., L.R.C.P.Lond., York Lodge, Cliff Cottage Road, Bournemouth.
1885. Street, Charles Tidbury, M.R.C.S., L.R.C.P.Lond., Moulton Hall, Middleton Tyas, Yorks.
1909. Stuart, Frederick J., O.B.E., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Northampton County Mental Hospital, Berrywood.
1900. Sturrock, James Prain, M.A.St.And., M.D., C.M.Edin., H.M. Commissioner, General Board of Control for Scotland, 25, Palmerston Place, Edinburgh.
1886. Suffern, Alex. Canning, M.D., M.Ch.R.U.I., Glen-y-Mor, Hill Head, Fareham, Hants.
1921. Suffern, Canning, M.A.Camb., M.R.C.S., L.R.C.P.Lond., Hill Head, Fareham, Hants.
1922. Sullivan, Patrick Daniel, F.R.C.S., L.R.C.P.Irel., Medical Superintendent, Verville Asylum, Clontarf, co. Dublin.
1894. Sullivan, William Charles, M.D., B.Ch.R.U.I., Medical Superintendent, State Criminal Lunatic Asylum, Broadmoor, Crowthorne, Berks.
1918. Sutherland, Francis, M.B., Ch.B.Edin., D.P.H., Broadford, Skye, N.B.
1919. Suttie, Ian D., M.B., Ch.B., F.R.F.P.&S.Glasg., Medical Superintendent, C.L.D., Perth Prison, Perth.
1908. Swift, Eric W. D., M.B.Lond., Physician, Valkenberg Mental Hospital, Observataens, Cape Town, S. Africa.
1923. Tattersall, Stanley Roy, M.R.C.S., L.R.C.P.Lond., Pathologist, County Mental Hospital, Lancaster.
1910. Taylor, Arthur Loudoun, B.Sc., M.B., F.R.C.P.Edin., 4, Mayfield, Terrace, Edinburgh.
1897. Taylor, Frederic Ryott Percival, M.D., B.S.Lond., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, East Sussex Mental Hospital, Hellingly.
1921. Thomas, Cyril James, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, County Mental Hospital, Lancaster.
1920. Thomas, Frederic Percival Selwyn, M.D., Ch.B.Vict., Ranelagh, Cherterton, Newcastle, Staffs.
1908. Thomas, Joseph David, B.A., M.B., B.C.Camb., Northwoods House, Winterbourne, Bristol.
1911. Thomas, William Rees, M.D., B.S., M.R.C.S., M.R.C.P.Lond., M.P.C., Medical Superintendent, Rampton State Institution, near Retford, Notts; Gray Ridges, Woodbeck, Retford, Notts.
1921. Thompson, James Arthur, B.A., M.B., B.Ch.Dubl., Surgeon-Cdr. R.N., Royal Naval Hospital, Haslar.
1921. Thomson, Aidan Gordon Wemyss, M.B., Ch.B.Glasg., Assistant Physician, Glasgow Royal Asylum, Gartnavel.
1922. Thomson, Harry Torrance, M.D., C.M.Edin., 13, Lansdowne Crescent, Edinburgh.
1903. Thomson, Herbert Campbell, M.D., F.R.C.P.Lond., Assist. Physician, Middlesex Hospital, 34, Queen Anne Street, London, W. 1. (Lecturer on Neurology, Middlesex Hospital.)
1920. Thomson, William George, M.A., M.B., Ch.B.Aberd., D.P.H., Senior Assistant Medical Officer, Cheadle Royal, Cheadle, Cheshire.
1922. Thorne, James Paget, M.B., Ch.B.Edin., 5, Douglas Crescent, Edinburgh.
1901. Tighe, John V. G. B., M.B., B.Ch.R.U.I., Medical Superintendent, Gateshead Mental Hospital, Stannington, Northumberland.

1914. Tisdall, Charles Jerome, M.B., Ch.B.Edin., D.C.M.S. Ministry of Pensions, Tue Brook Villa, Liverpool.
1903. Topham, J. Arthur, B.A.Camb., M.R.C.S., L.R.C.P.Lond., Kent County Mental Hospital, Chartham, Canterbury.
1896. Townsend, Arthur Allen Deykin, M.D., B.Ch.Birm., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Barnwood House Hospital for Insane, Gloucester.
1903. Tredgold, Alfred F., M.D.Durh., M.R.C.S., M.R.C.P.Lond., F.R.S.Edin., "St. Martin's," Guildford, Surrey.
1908. Tuach-MacKenzie, William, M.D., Ch.B.Aberd., Medical Superintendent, Royal and District Asylums, Dundee; Westgreen, Dundee. (Lect. on Ment. Dis., St. And. Univ.)
1881. Tuke, Charles Molesworth, M.R.C.S.Eng., Chiswick House, Chiswick, W. 4.
1906. Turnbull, Peter Mortimer, M.C., M.B., B.Ch.Aberd., Senior Assistant Medical Officer, Mental Hospital, Caterham.
1909. Turnbull, Robert Cyril, M.D., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Essex County Mental Hospital, Colchester.
1889. Turner, Alfred, M.D., C.M.Edin., Medical Superintendent, Plympton House, Plympton, S. Devon.
1906. Turner, Frank Douglas, M.B., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, Royal Eastern Counties Institution, Colchester.
1922. Twomey, John Christopher, M.B., Ch.B., D.P.H.Liverp., Assistant Physician, The Mental Hospital, Pretoria, South Africa.
1917. Vevers, Oswald Henry, M.R.C.S., L.R.C.P.Lond., Norton Vicarage, Evesham.
1922. Viehoff, Herman Crowther, M.R.C.S. L.R.C.P.Lond., Coton Hill Mental Hospital, Stafford.
1904. Vincent, George A., M.B., B.Ch.Edin., Assistant Medical Superintendent, St. Ann's Asylum, Port of Spain, Trinidad, B.W.I.
1894. Vincent, William James N., C.B.E., M.B., B.S.Durh., M.R.C.S., L.R.C.P.Lond., Medical Superintendent, South Yorkshire Asylum, Wadsley, nr. Sheffield. (Lect. on Psychiatry, Univ. of Sheffield.)
1923. Wadsworth, George Reginald, M.B., B.Ch.Belf., Assistant Medical Officer, County Mental Hospital, Lancaster.
1913. Walford, Harold Rosser Syleman, M.R.C.S., L.R.C.P.Lond., Senior Assistant Physician, Valkenburg Mental Hospital, Cape Town, S. Africa.
1920. Walker, James, M.D., Ch.B.Edin., D.P.H., M.P.C., Senior Assistant Medical Officer, Cardiff City Mental Hospital, Whitchurch, nr. Cardiff.
1914. Walker, Robert Clive, M.D., Ch.B.Edin., Deputy Medical Superintendent, West Riding Asylum, Menston, nr. Leeds.
1923. Walker, William H., L.R.C.P., L.R.C.S.Glasg., "Rydal," West Crescent, Darlington, Yorks.
1908. Wallace, John Andrew Leslie, M.D., Ch.B.Edin., M.P.C., Mental Hospital, Callan Park, Sydney, N.S.W.
1912. Wallace, Vivian, L.R.C.P.&S.Irel., D.P.H., Assistant Medical Officer, Ballinakill, Multyfarnham.
1920. Wanklyn, William McConnel, B.A.Camb., M.R.C.S., L.R.C.P.Lond., D.P.H., Principal Assistant in the Public Health Department of the London County Council, County Hall, Westminster, S.E. 1.
1889. Warnock, John, C.M.G., B.Sc., M.D., C.M.Edin., 28, Addison Road, Kensington, W. 14.
1895. Waterston, Jane Elizabeth, M.D.Bruce, L.R.C.P.&S.Edin., M.P.C., 85, Parliament Street, Cape Town, South Africa.
1922. Watson, Douglas Chalmers, M.D., F.R.C.P.Edin., Physician, Royal Infirmary, Edinburgh; 11, Walker Street, Edinburgh.
1891. Watson, George Alfred, M.B., C.M.Edin., Pathologist to the Lancashire County Asylums, M.P.C., Rainhill Cottage, Rainhill, Liverpool.

1908. Watson, Hugh Ferguson, M.D., Ch.B.Glasg., L.R.C.P.&S.Edin., L.R.F.P.&S.Glasg., F.R.S.Edin., D.P.H., Deputy Commissioner, General Board of Control for Scotland, 25, Palmerston Place, Edinburgh; Northcote, Edinburgh Road, Perth.
1911. Webber, Leonard Mortis, M.R.C.S., L.R.C.P.Lond., Senior Assistant Medical Officer, Surrey County Mental Hospital, Netherne, Coulsdon.
1922. Webster, William Leckie, M.B., Ch.B.Edin., Capt. (Bt.-Major) R.A.M.C., "D" Block, Royal Victoria Hospital, Netley, Hants.
1919. Westrupp, Joseph Perceval, M.R.C.S., L.R.C.P.Lond., Medical Officer, The Old Manor, Salisbury.
1911. White, Edward Barton C., M.R.C.S., L.R.P.C.Lond., Medical Superintendent, Bristol Mental Hospital, Fishponds, Bristol.
1884. White, Ernest William, C.B.E., M.B., M.R.C.P.Lond., Betley House, near Shrewsbury. (*Hon. Sec. South-Eastern Division, 1897-1900.*) (*Chairman Parliamentary Committee, 1904-7.*) (PRESIDENT 1903-4.)
1921. Whitelaw, William, M.B., B.Ch.Glasg., Director Western Asylums Research Institute; 10, Claythorn Road, Glasgow, W.
1905. Whittington, Richard, M.A., M.D.Oxon., M.R.C.S., L.R.C.P.Lond., 1, Eaton Gardens, Hove, Sussex.
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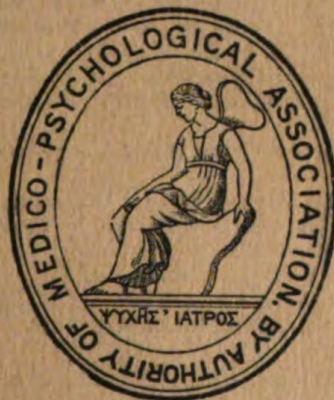
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Part I.—Original Articles.

Epidemic Encephalitis: Some Psychical Sequelæ.⁽¹⁾ By R. D.
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INTRODUCTION.

NUMEROUS observations have lately been recorded in medical literature on the acute manifestations of epidemic encephalitis; but the late after-effects, especially those of a psychotic nature, have been seldom described. Kirby and Davis (1) have emphasized this, and have recorded 18 cases in their early and later stages. They remark that "a satisfactory solution of certain of the psychiatric problems presented by this disease will require a longer period for clinical observation of cases than has elapsed since the appearance of the epidemic of 1918-19." The following series of 10 cases is offered as a contribution to the clinical records of the sequelæ of the disease, especially from the psychiatric point of view. Eight of them originated in connection with the epidemic of 1918-20. The remaining two are of remoter origin, and are admitted on account of their close resemblance to the others, and of their special interest from the point of view of classification and prognosis. Five of them (3, 5, 6, 9 and 10) are, or have been, in mental hospitals. In this connection the only statistics available to me are those quoted by Kirby and Davis (*loc. cit.*) for the New York State Hospitals in the hospital year from July 1, 1919, to June 30, 1920, when, out of 6,500 admissions, only 20 were considered to be probably cases of epidemic encephalitis. (But the epidemic was subsiding at that time.) The 5 cases mentioned should therefore be of considerable interest; and it is one of the purposes of this paper to show that a more thorough knowledge of the results of this protean disease would lead to its being diagnosed more frequently among the cases, even those of very long residence, in mental hospitals.

⁽¹⁾ Being an essay for which the author was awarded a special prize of £5 by the Association.

There has been a tendency among writers on the disease to divide the cases into psychotic and neurologic forms, according to the predominating features. Kirby and Davis are right in insisting that each case be considered as a whole, otherwise, in extending observations to cases where the symptoms of origin, as frequently occurs, are atypical, mistakes in diagnosis must arise. With this caution in mind, it is convenient to take up the psychiatric aspect of the following series first of all, and thereafter to deal more briefly with the neurological signs.

Literature.—Hohman (2) reports 23 cases. Most of these were observed in the acute stages, but some of them ran a chronic course, and for that reason his findings may be summarised here. He distinguishes nine syndromes which he considers characteristic:

(i) Great pressure of talk without distortion of stream of talk, and without mood alteration—persisting in one case at the end of five months. (ii) Euphoria—in one patient continuing for a year after the onset. (iii) Alertness and mental clearness immediately on arousal. (iv) Delirium. (v) Stupor. (vi) Behaviour oddities. (vii) Depression. (viii) Emotional instability and irritability. (ix) Memory defect. Of these (iii), (iv) and (v) were found only in the acute (early) stages. The remainder occurred also in one or other of the more chronic cases.

Hohman also describes four reaction types: depressive, psychoneurotic, delirious and organic. The depressive reaction was observed in only one chronic case. The psychoneurotic and delirious types were seen only in the early stages, but an organic reaction was observed in 4 chronic cases. Of these 4 cases, however, 2 had an intermittent pyrexia over the entire period of observation.

Bonhoeffer (3) records anxiety in the first few days, and long-continued psychotic manifestations, especially types resembling cocaineism. He found no intellectual defect in any of his cases.

Mingazzini (4) divides the illness into three phases—prodromal, hyperkinetic and lethargic. He characterises the lethargic phase as a pseudo-stupor and not a true coma, as in this period there are frequently hallucinations of sight and hearing, without affect. Delirium is often present, and catatonia, *flexibilitas cerea* and catalepsy are the terms he uses to distinguish the motor anomalies (*v. inf.*) in the lethargic phase. Recovery from the latter is often slow, and symptoms remain that are slow in disappearing; these are adynamia and apathy, which may be sufficiently pronounced to be called “neurasthenia” or “melancholia.” Mannerisms and inverted sleep rhythm are also sequelæ.

Kirby and Davis (1) usefully attempt to discriminate the principal mental reaction types occurring in the disease. They point out that

in epidemic encephalitis we are dealing in all probability with a toxic-infectious agent, and they accordingly adopt Hoch's classification of mental reaction types.

"These are: (i) Organic reactions—characterised essentially by impairment of apprehension, interference with elaboration of impressions, defects in orientation and retention, difficulty in activation of memories, with variability in mental capacity and level of attention—the so-called mental tension defect. It is now well established that this reaction is seen only when the brain has been damaged, temporarily or permanently, including injury by toxic-infectious agents.

"(ii) Affective reactions—characterised by emotional disturbance following essentially the pattern of the normal affective states. Typical examples are the manic-depressive oscillations and other benign emotional disorders.

"(iii) Trend reactions. These are characterised by abnormal trend and ideas, an unusual attitude towards the outside world, with constitutional peculiarities and psychogenic mechanisms in the foreground. Examples are schizophrenic and paranoid states.

"While these mental reaction types are often associated clinically in pure form, they need not coincide with what we call 'mental diseases.' In fact, one reaction does not exclude another. . . . It is our view that the psychiatric problem of epidemic encephalitis belongs essentially to the realm of the organic, more specifically the toxic-infectious mental types."

They add that the most frequent mental symptoms are drowsiness and delirium; that trend reactions are rare after the sensorium has cleared; but that, on the other hand, a peculiar affective state was liable to persist after the disappearance of all other mental symptoms.

Grossman (5), in a re-examination of 89 cases from six months to two years after the onset of illness, found irritability and depression to be the most frequent emotional disturbance; in a few cases a euphoric state was present; and a number showed compulsion or fear neuroses. Changes in disposition and disturbances in memory and reasoning were also remarked.

Method.—In each case a detailed mental and physical examination was made, with an anamnesis as complete as it was possible to obtain. The anamnesis is especially important for anomalous cases, and those occurring sporadically. Referring to pseudo-Parkinsonian cases, Bing (10) says, "Without an anamnesis the diagnosis would without doubt be Parkinson's disease."

Each case is taken up and commented on in detail. Thereafter the cases are considered in a group under the headings of "emotional reactions," "sleep," etc. A review is also made of the physical signs, the diagnosis and prognosis are considered, and lastly, the conclusions

which are come to in regard to type of disorder, classification, prognosis, etc., are summarized.

GENERAL SYMPTOMATOLOGY.

Emotional reactions.—From a review of the cases described it appears that while at least half of them showed an organic reaction (delirium) in the early stages, the most common psychic residuum is an emotional alteration. This seems at first to be in contrast to the findings of Kirby and Davis (1), who consider that "the psychiatric problem of epidemic encephalitis lies essentially in the realm of the organic reaction types." But the statement refers only to the earlier stages; and a survey of their 18 cases seems to show that only in 3 cases was an organic reaction present in the chronic stage; while the authors themselves remark, "the striking feature in all fifteen patients who did not recover was a change in the emotional reactions." This is in accord with the observations made in the present series.

In view of the grave physical disability existing in many of the patients, it is natural to ask whether the emotional change may not be more apparent than real; whether there is not a loss of showing affect, rather than an actual emotional deterioration. This was not borne out by the present inquiry; some of the ten patients confessed to a feeling of contentment, others to actual well-being, or even happiness, and in them all there was a strange lack of anxiety or worry as to the outcome of their illness, amounting, indeed, to a lack of insight.

The most common affective disorder is an apathy, varying in degree, with an accompanying depression in some cases, in others with a feeling of contentment or well-being. The following are the results of observations of the 10 cases in detail:

Apathy is present in 9 cases. In 4 of them it is combined with depression (Cases 2, 3, 4, 5). In 2 cases (1 and 7) it is accompanied by a feeling of well-being. In Case 9 the apathy is so profound as to amount to stupor, and in addition there are mutism, resistiveness, and irritability, but these do not amount to negativism. Kirby and Davis (1) point out that negativistic features are rare in encephalitis, and that the stupor of encephalitis has none of the characteristics of catatonic stupor. In the present case also these are absent—the resistance is not spring-like, there are no excited episodes, no fantastic postures, and no grimacing. Nevertheless, the term "catatonia" is frequently used in describing cases of epidemic encephalitis which show rigidity and *flexibilitas cerea* (e.g., Mingazzini, quoted above). This is to be deprecated, and "catatonia" should be reserved for cases showing the definite psychotic symptom-complex well known to psychiatrists.

In Case 7 a certain emotional facility suggests a degree of pseudo-bulbar involvement.

Case 6 is in striking contrast to the others; there was an exalted mood, with psychomotor excitement, lasting from the third to the eighth month of illness. The mood was in harmony with the delusional ideas.

Volitional disorder.—According to McDougall (6), the inter-relation of volition and emotion is very close, and essentially of a dynamic nature. He defines volition as “the supporting or reinforcing of a desire or emotion by the co-operation of an impulse excited within the system of the self-regarding sentiment.” Now, “a sentiment is an organised system of emotional dispositions centred about the idea of some object” (McDougall, *loc. cit.*). Hence, if the emotions be perverted or their strength diminished, we should expect a corresponding perversion or diminution of volition. This is, in fact, what is found in cases of epidemic encephalitis. Mingazzini (*loc. cit.*) especially emphasizes the presence of what he calls “adynamia” in his cases. In the present series the volitional disorder is very evident. All but one (Case 6) of the patients display little or no spontaneous activity; they attend to the calls of nature, and do little else. They remain motionless for hours on end, reading nothing, doing nothing. They sit “gazing out of the window for hours.” They have no spontaneous conversation. Subjectively, they “haven’t the heart to do” their work, or their “ambition is all gone”; or they “don’t care.” Asked if they wish to return to work, some of them assent, but without any show of feeling, and with no more interest than an ordinary person would display in some abstract proposition in an unfamiliar science.

The impediment presented by the paresis must, of course, be allowed for, but the subjective phenomena seem sufficient to indicate a profound mental change in the volitional sphere, with which emotional deterioration is closely connected.

Flexibilitas cerea occurred in 2 cases, echolalia in 1, mutism and resistiveness in another.

Trend reactions.—Abnormal ideas are evident in only 2 cases (5 and 6). In Case 5 the ideas were not well defined; they seemed to depend on the depression. A kind of psychic hallucination also occurred: “I seemed to be back at work; something told me I wasn’t doing it well.”

In Case 6 a psychogenic mechanism is clearly present. The delirium had an obvious wish-basis. In addition, however, there were hallucinations, illusions, and psychomotor excitement, so that the term “psychogenic delirium” might be applied.

Delirium.—This is not a manifestation of the chronic stage of the

disease, except in Case 3. In Case 6 a psychogenic type of delirium lasted over a period of months.

It seems worthy of note that in only 4 of the present series (2, 6, 8, 10) is there an undoubted history of early delirium. In Case 9 it is possible that the early symptoms were delirious in origin; and in Case 5 there was apparently a period of mental confusion. In the remaining 4 cases delirium was not present at onset. This is important for the diagnosis of the late manifestations, where considerable weight is placed on the history; many writers emphasize the frequency of delirium; thus Kirby and Davis found delirium in 15 out of 18 cases, and suspected it in the remaining 3.

Intellectual functions.—When the severity of the infection, as judged by the initial symptoms and by the lasting effects, both physical and mental, is considered, it might well be expected that a considerable defect would remain also in the field of intellect. This expectation is strengthened if the results of epidemic encephalitis be looked upon in the light of the toxic-infectious group in general; fluctuating defects of memory, retention, attention, and the more complicated functions, might well be expected—in brief, the chronic organic type of reaction (*cf.* D. K. Henderson (7) (8), by whom 2 cases are recorded of permanent memory defect following typhoid fever). A review of the case-material in the light of these considerations is interesting.

Thus, Case 1 shows a certain simplicity of mind, with defective memory for school knowledge, and impairment of the power of simple calculation. But these were probably pre-existent to a certain extent. There is no attention defect, and no fluctuation in mental tension. Case 2 shows no loss in the intellectual field.

In Case 3 orientation is imperfect, and there is a diffuse memory defect. There is also fluctuation of attention and difficulty in thinking. At nights there is occasionally actual delirium. Her age is 70, however, and these symptoms may be dependent on senile cerebral changes. There is no evidence of excessive arterio-sclerosis.

Retardation is the only obvious defect in Case 4.

Cases 5 and 6 show no remaining defect in this field. Case 6 was considered to be "simple" for a time after the subsidence of prolonged excitement.

Case 7 exhibits a slowing of mental reaction time.

In Case 8 there is no impairment.

Case 9 is mute, and consistently inattentive.

In Case 10 the simpler intellectual functions are intact, but an attempt to secure his co-operation in more complicated tests revealed a lack of attention.

Thus only in one case (3) was there a diffuse intellectual impair-

ment, and in it there is the complicating senile factor. Case 1 and (for a time) Case 6 show a more limited defect. Cases 4 and 7 exhibit only some retardation, and in Case 10 there is only some fluctuation of attention, and no other obvious change. Cases 2, 4, 5, 8 and (ultimately) 6 are normal in the intellectual field.

The "organic" reaction-type is therefore conspicuously absent in the chronic stages of the malady.

Sleep.—Sleep disorder is a feature of most mental diseases, but it is usually to be regarded as incidental. In epidemic encephalitis, on the other hand, the sleep disorder is one of the outstanding symptoms, and its nature is frequently such as to be of diagnostic value. All varieties of sleep disturbance have been observed.

The most common abnormality is hypersomnia—the patient sleeps long at night, and is drowsy in the daytime. Kirby and Davis (1) recognize four gradations, *vis.*, drowsiness, lethargy, stupor, and coma.

Findlay and Shiskine (8) drew attention to the inverted sleep rhythm in a number of their cases. The patient cannot sleep at night, but in the early morning he falls asleep and remains asleep, often all day.

Climenko (9) describes insomnia (more accurately hyposomnia) as an early symptom, and Kirby and Davis describe it in 3 cases. It occurs also as a sequel to hypersomnia (Bremer (9), Kirby and Davis (1)), and is then frequently accompanied by over-activity. This occurred in Case 6 of the present series.

Case 1 sleeps well at night, drowsy by day—hypersomnia.

„ 2 Ditto.

„ 3 sleepless and restless at night (nocturnal delirium), sleeps by day (inverted rhythm).

„ 4 hyposomnia throughout entire illness.

„ 5 insomnia at onset, followed by hypersomnia.

„ 6 hypersomnia, followed by hyposomnia, and then by a return to hypersomnia.

„ 7 hypersomnia, followed by inverted sleep rhythm.

„ 8 insomnia for two days at onset, then hypersomnia.

„ 9 inversion at first, now normal.

„ 10 insomnia for a day or two at onset, then hypersomnia, which has passed off.

These cases demonstrate very well the variety and striking nature of the sleep disturbance, and the tendency for more than one type to occur in the same case in succession.

Physical aspects.—Eight of the cases present a clinical picture which has been frequently referred to in recent literature, but not often described in detail. Bing (10) has published 2 cases; one of

them, of three years' duration, was a typical paralysis agitans without indications of improvement. The second, at the end of a year from the onset, had salivation and some muscular weakness. He believes that the usual paralysis agitans and sporadic encephalitis are one and the same, and considers also that the post-encephalitic syndrome is not due to the virus, but that the initial lesion is so intense as to cause a disease picture which is progressive.

Barré and Reys (11) have described 4 cases, and they differentiate the following characteristic components of the variously-styled "Parkinsonism," "paralysis agitans sine agitatione," or "pseudo-Parkinsonian syndrome."

1. The absence of spontaneous movement.
2. Slowness of voluntary movement.
3. Muscular rigidity, generalised, but with its principal local manifestation (the most immediately striking feature of the syndrome) in the face, viz.—
4. The Parkinsonian mask.
5. Tremor.

All these are in evidence in each of 7 of our cases. To these 5 signs, Barré and Reys add oculomotor paralysis and disturbances of equilibrium; neither of which are at all constant in our series. It would seem justifiable to regard them as inessential to the typical clinical picture.

The remaining physical signs found in varying combinations in our cases may be tabulated thus:

	Cases.							
	1	2	3	4	7	8	9	10
Paresis (local)
Reflexes (unilateral exaggeration)
Reflexes (general exaggeration)
Dysphagia
Salivation
Speech defect
Nystagmus
Tremor

Cases 5 and 6 showed no physical signs in the chronic stage.

Facial paresis or paralysis was an early sign which tended to pass off completely. The limb palsies, on the other hand, were in some cases later of appearing, but were persistent. With them were associated increased tendon reflexes.

Dysphagia was a prominent feature in 4 cases, and was usually later in appearing.

The speech was usually slow and monotonous. In Case 8 the voice was reduced to a whisper.

Tremor was apparent only on voluntary movement in 5 cases.

This sign would therefore be of some importance in distinguishing such cases from Parkinson's disease.

No unequivocal sensory disturbance was found in any case. In those cases where the cerebrospinal fluid was examined in the chronic stage no abnormality was found. A positive Wassermann occurred in a boy æt. 16.

DIAGNOSIS.

The diagnosis is dealt with in certain cases in the "Comment," where a discussion seemed necessary. In this way Case 1 was discussed in relation to disseminated sclerosis, and Cases 3 and 10 in relation to arterio-sclerosis.

A history as detailed as possible is very desirable. Otherwise, if the mental symptoms predominate, such diagnoses as "depression," "melancholia" and "dementia præcox" are liable to be made (and were made in certain of the above cases that had been sent to mental hospitals); and if physical symptoms of a Parkinsonian type occur, the diagnosis is inevitably Parkinson's disease. (Bing (10)).

In cases where the diagnosis of manic-depressive insanity suggests itself, the history, the personality, the course of the disease (the absence of previous attacks, and the unvarying degree of depression), the type of volitional disorder, the absence, as a rule, of retardation, the concomitant physical symptoms, if any, and above all, the prominence of apathy rather than depression, should exclude such a diagnosis.

In excited cases the excitement may be indistinguishable from a true mania (Kirby and Davis (1)), but here the history and the characteristic sleep disturbance should prevent error.

Where the disease occurs later in life, and involution melancholia is considered, similar considerations arise, and the absence of delusions is important.

In contra-distinction to dementia præcox there is no "splitting"—the mood is in harmony with the thought content—and there are no bizarre ideas. True catatonic symptoms, as has been pointed out above, are absent.

PROGNOSIS.

A detailed analysis of the duration and progress of the cases is of some interest in relation to the prognosis of epidemic encephalitis in general.

It is noteworthy that the presence of well-marked physical residuals influences the prognosis unfavourably, both from the mental and from the physical viewpoint. Of Kirby and Davis's (1) 10 cases with physical residuals only one could be said to have made a complete

recovery mentally. Of Grossman's (5) series, 7 gave definite evidence of progressive deterioration. All of these 7 had well-marked physical residuals, 5 being of the Parkinsonian type. The remaining 82 were gradually improving. Grossman's figures relate only to the physical symptoms.

Of the 10 cases in this paper, one recovered after nine months, with some drowsiness for a few months longer. The remaining 9, of which 8 have well-marked physical residuals, show no tendency to improvement; on the contrary 8 of them exhibit progressive deterioration, either mental or physical, or both.

Case 1 is of comparatively short duration (four months); the condition, both mental and physical, seems stationary.

In Case 2 the physical symptoms were progressing when last seen (nineteen months after onset). The mental features appeared stationary.

In Case 3 mental and physical features have been increasing over a period of eight years. But advancing age is a complicating factor.

Case 4 was under observation from the ninth to the twelfth month of illness, and during that period seemed stationary in all respects.

Case 5, which has shown no physical symptoms while under observation, deteriorated slowly mentally for two years, but for the past year has shown no appreciable change.

Case 6 began to improve mentally six months from the onset, and recovered in nine months. All physical signs had disappeared in just over five months.

Case 7 eighteen months after onset was deteriorating physically and mentally.

Case 8 developed further physical symptoms fifteen months after the onset, and three months later the general physical condition was deteriorating. The progress of the mental condition was difficult to gauge on account of the lack of previous data.

Case 9 had improved so far at the end of eighteen months as to be able to look after her household duties. The improvement was maintained for five years, but at the end of that time she relapsed, and during the subsequent twenty-four years has gradually deteriorated physically and mentally. This case is therefore of unusual interest from the prognostic aspect.

Case 10 improved after five months, but has since become worse physically and mentally, and at the time of examination (eighteen months after onset) was a patient in a mental hospital. A tendency to extension of the disease, as well as to accentuation of the existing lesions, long after the acute stage has passed and the pyrexia subsided, is to be observed in Case 2 a year after onset (dysphagia); in Case 4, four months after (dysphagia and monoparesis); in Case 7, after

five months (ocular palsies), and after fifteen months (dysphagia); and in Case 8 dysphagia set in fully a year after onset. Changes occurred in Case 10 between the time of discharge from hospital (five months after onset), and his admission to a mental hospital (two years from onset)—left facial paresis had gone, but general Parkinsonian symptoms had appeared.

Even where the disease appears to be stationary, therefore, it is not safe to disregard the possibility of actual extension of the disease till at least eighteen months after the initial infection. This seems to support Netter's (12) view that the virus may remain active for months, rather than Bing's opinion (*vide supra*) as to further changes being secondary to the initial lesion.

The prognosis of the 9 unrecovered cases is apparently bad on account of their chronicity and almost universal tendency to deterioration.

SUMMARY AND CONCLUSIONS.

Eight of the above 10 cases are sequelæ of epidemic encephalitis. The remaining two are of sporadic origin. They are admitted to the series on account of their probable similar ætiology, their long duration, and their importance from the diagnostic and prognostic point of view.

The striking mental residuum is an emotional disorder which is most commonly an apathy. The apathy is usually pronounced, and is in some cases accompanied by a mild degree of depression. A certain amount of euphoria may, on the other hand, be present, and in one case this amounted to definite exaltation, accompanied by psychomotor excitement.

The conclusion was come to that there is a real diminution in the field of emotional response, and not merely a diminished showing of affect. This is more emphatic than the conclusions of Kirby and Davis, who considered the disturbance to be chiefly a loss of showing affect.

Closely connected with the emotional alteration is a volitional disorder, consisting in 9 of the cases of adynamia. *Flexibilitas cerea* and echolalia are occasional symptoms. Mutism and rigidity occurred in one case. The rigidity so frequently observed is of physical origin.

The use of the term "catatonia" with reference to the volitional disorder is deprecated.

Trend reactions are rare in these chronic cases. Where delirium occurs apart from the onset, it is probably due to a complication.

There is occasionally a slight, patchy, intellectual defect in uncomplicated cases, but, as a rule, the chronic organic type of reaction is absent.

Sleep disturbance is a characteristic sequel of the disease. Its nature varies in different cases and at different times in the same case. Hyposomnia, hypersomnia and inverted rhythm are all met with.

A Parkinsonian syndrome is a frequent physical residuum. Its presence appears to influence the entire prognosis unfavourably.

In dealing with the question of diagnosis, it may be pointed out that sporadic cases of the disease do occur (Bing (10), Kraus (9), and Pardee (15)) and that they, like Cases 3 and 9 above, may occasion great difficulty in diagnosis. Even these cases which originate in a recognized epidemic may later be diagnosed as manic-depressive insanity, dementia præcox, and so on. The points of difference are discussed, and emphasis laid on the importance of the history, and of a complete neurological examination. Where the mental symptoms are outstanding the physical residuals are apt to be overlooked, and *vice versa*, so that a diagnosis of "Parkinson's disease" may be made.

The prognosis of chronic cases is poor, especially these with pronounced physical signs. Mental and physical deterioration are apt to increase with time. Extension of the disease may occur up to fifteen months from onset.

CASES.⁽³⁾

(³) For reasons of space, only Cases 3, 5 and 8 are published in full.

CASE 1: *Comment.*—The disease occurs in a young person in association with an epidemic of encephalitis.

This case exhibits the following physical features: generalized muscular rigidity, with mask-like facies and a "wooden" attitude; infrequency and slowness of spontaneous movement; slow, monotonous speech; nystagmus, and weakness of convergence, with pallor of the temporal halves of the optic discs; hemiparesis, with increase of reflexes, and in the upper arm, intention tremor and adiadokinesis.

There are thus two groups of symptoms—a Parkinsonian group, and a syndrome suggestive of disseminated sclerosis. The former, however, is the much more prominent.

Cases combining the symptoms of paralysis agitans and disseminated sclerosis have been recorded (Oppenheim).

The age of the patient, the nystagmus, the intention tremor, the pallor of the temporal halves of the discs, the hemiparesis and the history of diplopia are in favour of the diagnosis of disseminated sclerosis. On the other hand, the abdominal reflexes are present and equal on the two sides, there is no spasticity and no Babinski, and there is no contraction of the visual fields.

Moreover, the fact that any or all of these signs, with the possible

exception of the pallor of the disc, may occur in epidemic encephalitis ; the occurrence of the case in association with an outbreak of the latter disease, and above all, the Parkinsonian signs, make the diagnosis of encephalitis the more probable of the two.

The principal psychic feature is the emotional attitude. The mood is optimistic in the highest degree. She is perfectly certain that she will recover. There is no trace of anxiety on this point. Her behaviour corresponds with her mood. She is quiet, smiles happily when spoken to, and is obviously contented. Adynamia is also present. There is a patchy intellectual defect ; this may in part be due to a pre-existing mental defect, as suggested by the simplicity of her manner, the echolalia, and the gaps in her school and general knowledge ; but that some of it at least is acquired is supported by her statement that she has found greater difficulty in doing simple calculations since the onset of her illness.

While, therefore, the affective reaction with volitional loss is the prominent feature, there are traces of an organic reaction also.

CASE 2: *Comment.*—The most striking psychical signs at the present moment are apathy (despite his serious physical condition), lethargy, and retardation, combined with apparently unimpaired intellectual faculties in memory, judgment, ability to calculate, apperception, etc. These occurring in a man *æt.* 41, after a period of confusion, with associated local palsy, and at a time when epidemic encephalitis is prevalent, are practically diagnostic of the disease.

It is noteworthy that the so-called organic reaction, notwithstanding the admittedly toxic cause and the persistent physical disorders, is conspicuously absent.

That the lethargy and retardation were not observed for twelve months after the onset, and that they have been gradually increasing, is of importance in the prognosis of early cases of this disease. It is surely also remarkable that while the original facial paralysis has completely cleared up, muscular rigidity, most marked in the face, but occurring also in the body and limbs, should develop and become progressively worse, and that dysphagia and salivation should appear twelve months after the original infection. These facts support Netter's (12) view (*vide infra*).

The mask-like face, the immobility of the body, the characteristic attitude, the salivation, and the slowness of speech and voluntary movement, constitute the chief physical features, and give to the clinical picture a clear resemblance to Parkinson's disease ; and it seems justifiable to regard this as the sequela of an attack of epidemic encephalitis.

The failure of protein-shock treatment seems rather to support

Bing's (10) contention (as opposed to Netter's) that these signs are dependent on a degenerative process, the original infection having died out.

CASE 3.—Female, æt. 70; occupation, at home; admitted June 1, 1921, as a voluntary patient to the Royal Asylum, Gartnavel.

Family history.—The father was twice married. By the first marriage there were four children, all girls. The eldest of these died young from a cause unknown to informant; the second died after marriage (childbirth?); the third sister is at present a patient in the same institution as the patient, who is the youngest.

By the second marriage there were three children, two boys and one girl, of whom one committed suicide.

Personal history.—At school she made fair progress (taking no prizes), and left it about 14 years of age. She liked company and had chums, both boys and girls. Her parents wished her to be a teacher, and she was at the Normal School for a year, but she had a hæmatemesis and ceased attending classes. She kept house thereafter for a brother, and lived with him after his marriage, becoming much attached to his son (whose death in the war, after the onset of her illness, distressed her greatly). She is described as, at that time, a good houseworker, clever at sewing, not musical and not much given to reading, and a church-goer, but not morbidly religious. She tended always to look on the gloomy side of things, but was active and capable till 1913, when her illness began.

On coming out of church one Sunday in 1913 she said to a friend, "I can't walk." She managed, however, to walk home, leaning on her friend's arm. She has ever since complained of loss of power in her limbs, especially on the right side. The weakness has gradually increased, and she has ceased to exert herself, or to take an interest in anything. She has had a feeling of malaise, has been depressed, and has felt unequal to her ordinary tasks. She was willing to work, she said, but could not. She did a little sewing occasionally until a year ago, but since then she has ceased even to attend to herself, having to be washed and dressed. Otherwise her habits are clean. At one period of her illness she is stated to have had diplopia, but the date of this is not remembered.

Condition on admission.—She felt depressed and weak. "Everything feels heavy." "My bones are all tired, and my legs and knees; my right side is the worst."

Her remote memory was only moderately good, being defective for names and dates more than for events. Her recent memory was fairly good. Orientation for place was correct, but for time it was imperfect—she gave the day and month correctly, but the year as 1922 (1921). Her grasp of school and general knowledge was very poor. Retention was defective. She failed to do simple calculations, saying, "I never was good at arithmetic."

Present condition.—Her mental condition remains very similar to what it was on admission. Her feeling of depression, for which she can give no reason, and her disinclination for even the lightest task, continue. There is no play of emotion; nothing stirs her depressed state. Her memory, orientation and retention defects are more obvious than before. Apprehension tests reveal no marked defect, but her power of apperception is much diminished; she reads the cowboy story with a few mistakes, which she spontaneously corrected, but was unable to give any account of it in her own words.

Attention fluctuates. She feels a difficulty in thinking. There is also a considerable fluctuation in her mental condition as a whole, which at times becomes one of confusion, and, more rarely, of delirium; she is then almost completely disoriented, saying that "the house is being robbed," that "the people opposite" (the other patients) "are going to do something" to her, or that she must "get up for the train is starting."

She is drowsy in the daytime and sleeps a good deal, but at night she is sleepless and restless, getting out of bed.

Physical condition.—She is very thin and old looking. There is a well-marked arcus senilis. The upper eyelids are slightly ptosed, the features immobile, and the whole expression mask-like. Her attitude never changes. The head is held stiffly and slightly bent, with the eyes looking always straight forward. She sits rigidly upright, rarely turning her head or moving a muscle. The limbs also are

rigid, and her fingers maintain one position, being semiflexed at the metacarpophalangeal joints, and having the thumb in apposition as if about to initiate the pill-rolling tremor of paralysis agitans. She remains always in the attitude described, except when compelled to rise and walk, which she does very slowly, with the whole body, except the lower limbs, in the same rigid position as before.

Her speech is slow and monotonous, with an initial pause. There is no enunciation defect, but her remarks trail off into silence, as if from lack of energy.

She is slow at eating and swallowing, but has not actual difficulty. All voluntary movements are slowed, and the extent of the retardation may be gauged from the fact that she succeeded in making with her right hand only five dots with a pencil on paper in ten seconds.

There is a generalised muscular weakness, greatest in the muscles of the face on the right side, the left side of the tongue, and the right arm. The right nasolabial fold is not so well defined as the left; when she shows her teeth, the upper lip is not raised so far on the right side, and is tremulous, and the tongue on protrusion deviates to the left. The right hand-grip is only a little stronger than the left. The strength of the grip in both hands is very slow in attaining its maximum.

The tongue is tremulous, and there is a coarse irregular tremor of the right upper limb on movement, amounting to actual jerking when finer movements are attempted. Her handwriting is so tremulous as to be practically illegible.

There is generalised myotatic irritability.

Reflexes.—All the ocular reflexes are present and active. Right biceps, triceps and supinator jerks are more active than those of the left arm. The epigastric and abdominal reflexes are active on the right side and absent on the left. Knee-jerks and ankle-jerks are active and equal. The plantar response is flexor on both sides. There is no ankle or patellar clonus.

Sensation.—There are no pains or paræsthesiæ. The sensibility to light touch is diminished in both upper and lower limbs, and localisation is often erratic. With painful stimulation similar results are obtained. Tests for the sensation of heat and cold reveal, especially in the fingers of the right hand, a lack of appreciation of the quality of a single stimulus, but when the contrast stimulus is applied to the same spot the difference is noticed. All the above results apply especially to the extremities—the hands and feet—which suggests that they may be dependent on a circulatory defect rather than on a lesion of the sensory apparatus.

The sense of position of the limbs is normal, and there is no astereognosis.

Special senses.—Smell: She is aware of common odours, but cannot name them, or select any of them from a series suggested to her. Taste: She recognises sugar, salt, and quinine. Hearing: She hears well with both ears. Vision: There is no irregularity or inequality of pupils. There is at present no diplopia and no strabismus. Convergence is weak. Otherwise the ocular movements are normal. She can read ordinary print without artificial aid. Colour vision and the visual fields are normal. The fundi are pale. The disc margins are well defined.

Comment.—Differential diagnosis: The case differs from the great majority of cases designated paralysis agitans in (i) the suddenness of onset, (ii) the general muscular weakness existing from the beginning, (iii) the history of diplopia, (iv) the localized paresis, involving the right arm, (v) the absence of tremor while at rest, and its presence in the right arm on voluntary movement, especially when fully co-ordinated movement is required (intention tremor), (vi) the definite depression synchronising with the onset of the physical symptoms, and continuing.

On the other hand there is an absence of a history of characteristic initial symptoms—lethargy, delirium, etc.—but this does not exclude an encephalitic origin (see Cases 1 and 2) (Walshe (14)). There is also the very definite existence of arterio-sclerosis, which certainly com-

plicates the psychotic picture, and might be considered to be the cause of the condition. There are, however, none of the "cerebral complexes"—disorder of speech, vision, etc.—or apoplectiform or epileptiform attacks, and the psychical symptoms of such a state—emotionalism, irritability, and characteristic memory loss are wanting. Moreover, the physical signs of arterio-sclerosis are not outstanding, the only one that is present is the thickening of the radials. The blood-pressure is low, and the heart is not enlarged. There is no albumen in the urine.

Oppenheim remarks (*Text-book of Nervous Diseases*, p. 307): "It is difficult to say whether arterio-sclerotic forms can be sharply distinguished from paralysis agitans, or whether the pathological processes are identical, the difference being one of intensity or localization."

To sum up: The attitude, the monotonous speech, the absence of spontaneous movement, the slowness of voluntary movement and the muscular rigidity of this patient make the case conform closely to the type described by Barré and Reys as occurring as a sequel to epidemic encephalitis, while other facts suggest a vascular origin. The weight of the evidence is in favour of the former.

From the psychiatric aspect the symptoms fall under several headings:

1. The emotional condition in one of depression and apathy, which are continuous except for—

2. Delirious episodes, when a certain fear is evident. But the fear reaches but a low degree of intensity. Under this head come also the memory, orientation, retention, mental tension, and apperception defects—evidences of an organic type of reaction.

3. Volitional slumping has been prominent almost from the beginning. There has been gradually increasing disinclination for the slightest task; and now she almost entirely lacks initiative. This condition is probably largely but not entirely dependent on her physical condition—weakness, malaise, etc.

4. The sleep rhythm is inverted. Night restlessness is common to epidemic encephalitis and arterio-sclerotic brain disease, and delirium or mental confusion at night is more characteristic of the latter than of the former.

The special interest of this case lies in the fact that it presents a picture closely resembling the chronic stages of epidemic encephalitis, that it occurred sporadically, that it presents atypical Parkinsonian features, and finally, on account of the accompanying long-lasting psychoses, has come to reside in a mental hospital.

CASE 4: *Comment.*—The occurrence of the case at a time when epidemic encephalitis is prevalent.

The striking group of physical signs: generalized rigidity, with its most obvious local manifestation in the mask-like countenance; infrequency of spontaneous movements; slowness of movement when it does occur (motor retardation), accounting, at least in part, for the dysphagia; slow and monotonous speech; tremor on *voluntary* movement.

These together constitute a syndrome closely resembling Parkinson's disease, but with obvious differences (*e.g.*, tremor on voluntary movement, and occurring in a man *æt.* 40).

The psychic symptoms: the initial psycho-motor excitement followed by apathy and depression with retardation, and adynamia with *flexibilitas cerea*, but with an entire absence of the so-called "organic reaction."

The sleep disturbance—persistent hypsomnia.

The lack of response to varied therapeutic measures, especially to "protein-shock" treatment (*vide* also Case 2).

CASE 5.—Male, *æt.* 45; admitted as a voluntary patient November 13, 1920; occupation, pattern-maker.

Family history.—The only fact of importance is that his mother was mentally afflicted, and in an asylum for three months.

Personal history.—He is said to have been always a strong, healthy man, good at his work, and steady in his habits. He married in 1901, and in 1902 went to South Africa, where he had a post as pattern-maker under the Union Government. His married life is described as happy. He did not, however, show as much affection towards his wife as he might have done. There have been no children. He masturbated even after his marriage, and this worried him a good deal.

About three years ago he began to have a feeling of general weakness, with pain across the shoulders. The doctor whom he consulted diagnosed rheumatism, and prescribed a belladonna plaster, which relieved him and enabled him to continue at his work. In November, 1918, he had a definite "breakdown"; he was excited, irritable, and emotional, weeping without apparent reason; he was depressed, often saying that there was nothing to live for; and he complained of dizziness and headache. His doctor recommended bed and a change of air, and the patient went up-country for two months; but little benefit ensued. He came to England subsequently, and went back to South Africa in January, 1920, where, however, he did not try to apply himself to work, displaying a great lack of interest and energy. In May, 1920, he again returned to this country, and took up work here, but left it in three weeks' time.

He has gradually become more and more unsociable and taciturn, and from time to time has shown ill-feeling towards his wife, having actually struck her on one occasion. There have been occasions when he seemed to hear voices, and to reply to them in obscene language. More than once he has wandered away from home, and on his return has failed to give a definite account of his movements. Since the beginning of his illness he has had no marital relations with his wife.

Sleeplessness troubled him in the early stages. Latterly he has been drowsy.

Condition on admission.—He was dull and depressed, but showed little retardation, answering questions fairly promptly and to the point. He did not give a spontaneous account of his illness, and had to be questioned closely. A feeling of depression was admitted, and he stated that he could not concentrate on his work or anything else, and that in consequence life seemed not worth living. The depression seemed to him to arise from a feeling that he had done wrong; he blamed himself for having done small pieces of work for his friends when he should have been doing Government work, and for sexual faults which had continued after marriage. The emotionalism mentioned above he believed to be due to his general depression, and his feeling of incapacity for work. Asked for an

explanation of his use of obscene language, he denied hearing voices, but said that he had had at times a kind of day-dream, a feeling that he was back at work, that something told him he was not doing his job well, and that in response to this feeling he used bad language.

Orientation, memory and grasp of general intelligence were unimpaired. He performed simple calculations slowly, but correctly. He realised that he was not well and in need of treatment. Blood for Wassermann reaction negative.

Progress of the case.—November 20, 1920 : He is a little brighter, and is walking in the grounds with other patients and an attendant.

February 24, 1921 : There is little change. He is lethargic and apathetic. Takes no interest in anything except whist, and can only be persuaded with difficulty to go for a walk.

June 29, 1921 : No change. He exhibits a vast inertia. He reads the papers, and speaks politely when spoken to, but his general bearing is lazy and indifferent. Only once has he shown any emotional reaction ; when he was taken before the class for demonstration he was angry and refused to go ; when he did go, he was sullen and unresponsive.

Present condition.—He sits in the day-room most of the day, taking little interest in anything beyond an occasional game of cards and billiards. He is quiet and even morose, and does not speak unless spoken to. His immobility is a salient feature. His expression is one of dull indifference ; on rare occasions he is known to smile, but his smile is always sardonic. When questioned he answers in an uninterested sort of way, in a low voice, and as briefly as possible ; some questions he does not answer at all, even when they are repeated. Emotionally he displays little elasticity. He is always more or less sullen. His depression, he feels, has not lifted in the slightest. He cannot concentrate, and his ambition is all gone. He " doesn't care " that he is ill, and does not believe that he will ever be any better, nor does he think it matters. Neither trying allusions nor jokes produce apparent response.

There is no gross intellectual disorder. Orientation is correct. Memory, recent and remote, is accurate. There is no retention defect. The grasp of school knowledge is good, and general knowledge is limited but accurate. Simple calculations are performed accurately and fairly smartly. Reading and writing show no defect. Apprehension and apperception are normal. His attention has to be closely held, for he tends always to retire into himself. Mental reaction time : He took half as long again to deal 50 cards in one heap as a normal person. When discrimination was required (dealing the cards into heaps according to their face-number) he took nearly three times as long as the normal person.

Physical condition.—He is a well-developed man of more than medium height. The distribution of hair, however, is of the feminine type—he is comparatively hairless, the hair on the face being scanty, and practically wanting on the cheeks, while the upper level of the pubic hair is horizontal.

The face is pale, but the mucous membranes are well coloured. The tongue is clean. Heart and lungs are normal.

Sensation.—There are no pains or paræsthesiæ.

Special senses.—Smell : Odours were perceived in the left nostril to the extent of 50 per cent. correct recognitions ; in the right none were correctly recognised. Taste is apparently normal. Vision : He can read ordinary print with both eyes. Ocular movements are normal. The visual fields are normal. The pupils are regular. The left is the larger. The fundi are normal. The discs show a physiological cup fairly well marked.

Reflexes.—Pupillary reflexes are active. The tendon jerks are brisk in the arms. The knee-jerks are rather sluggish. The Achilles-jerks are active. The abdominal and epigastric reflexes are more active on the left side. The plantar response is flexor on both sides.

Motor functions.—There is no pathological difference in the muscular force of the two sides. There is lack of energy in the hand-grip, but no slowness in coming into action. There is no tremor.

Cerebro-spinal fluid.—Cell count, 1.56 per c.mm. Centrifugalised deposit on slide gives 21 cells per 200 oil immersion fields (all lymphocytes). Globulin (Ross-Jones method)—extremely faint ring after three minutes. Wassermann negative. Colloidal gold 0011000000.

The pain across the shoulders, which was the first symptom, is suggestive of a radicular involvement (Walshe (14)).

Comment.—The suddenness of the onset, its occurrence during an epidemic of encephalitis, the mental excitement and the dizziness and headache, make the diagnosis of epidemic encephalitis probable.

The emotional disturbance has been the prominent one from the beginning, but in addition there is a slightly delusional trend. Yet notwithstanding the persistence of these reactions, indicating a profound mental change, and in spite of the very probable toxic origin of the disease, there is a complete absence of the so-called organic reaction supposed to be the characteristic result of toxins and infections. (There may have been, but only at the beginning, some mental confusion, as evidenced by his wandering away from home.)

The chief symptoms of the emotional derangement are apathy, with complete indifference to his surroundings and the ultimate course of the disease, diminution of the field of emotional response, moroseness, irritability, and alienation from his wife.

There is also lack of ambition, and even a diminution of ordinary spontaneity.

It is also worth noting that the psychosis has occurred in a man with an abnormal distribution of hair, and with an abnormal sexual life.

CASE 6: *Comment.*—The prodromal period of drowsiness.

The acute onset, with pyrexia (rather high—104°), rigor, headache, delirium, ptosis and evanescent facial palsy—a collection of symptoms very suggestive of epidemic encephalitis.

The somnolence for the first five months, replaced by hyposomnia for about six weeks, and recurring after that over a period of months, finally to pass off.

The sequence of psychical phenomena: delirium; stupor; exaltation and psychomotor excitement with illusions merging into a very definite trend reaction, hallucinations and delusions, and then during convalescence a return to mild exaltation, and finally to the normal, but with a lethargy persisting for some time.

The striking wish-basis in the delusion.

CASE 7: *Comment.*—Abrupt onset of lethargy, without pyrexia or delirium.

Within four months (at latest) ocular palsies, and commencing mask-like facies.

Positive Wassermann reaction in cerebro-spinal fluid.

About twelve months after the onset dysphagia appeared. About the same time, too, hypersomnia, which had diminished, gave place to inverted sleep rhythm. The changes in the clinical picture, of which the above are examples, are interesting. Thus the right pupil

is now smaller than the left, instead of the reverse, as at first; an early abducens weakness has passed off, and a convergence weakness is now present. Nystagmus has increased. The early unilateral facial paresis has passed off; the speech, at first merely feeble, is now feeble, slow, monotonous, scanning and slurring; coarse tremor apart from movement has latterly appeared in the right forearm; the knee-jerks have varied.

Mentally he was contented, even happy; he tended to be apathetic towards his surroundings, and with regard to his future he was complacent; the only intellectual change was a slight retention defect, and some slowing of mental reaction times.

CASE 8.—Female, æt. 24; occupation, secretary.

Family history.—Her father had a hemiplegia with aphasia in 1919, but he recovered sufficiently to return to work. A brother has recently developed obscure nervous symptoms following on a period of ill-health ensuing on Army service.

Personal history.—She was first seen by Prof. Monro on Wednesday, April 21, 1920. (We quote from his "Clinical Lecture on Lethargic Encephalitis"). She had had "headache for several weeks. Stopped work on April 15. Headache had been violent for two or three days before she stopped. Double vision from Friday till yesterday. Diplopia to-day on looking strongly to either side. No vomiting. Bowels moved freely (after medicine) into the bed in sleep. Slightly drowsy yesterday; very drowsy to-day. Says she is 'awfully sleepy,' but she can easily be roused. At times has talked nonsense, but at visit is quite intelligent, although voice rather feeble. From Friday till Sunday there was swelling in right orbital region. Giddiness in trying to rise. Slight fever. Pulse 118. Bilateral ptosis with overaction of frontals. Tongue slightly dry. Power of showing teeth feeble. No certain palsy except in ocular regions. Abdominal reflexes active. No recognisable optic neuritis. Chest and abdomen normal."

In addition, she was "run down" before the onset of the illness; at the beginning she had no sleep for two nights (before the onset of lethargy); she seemed excited and talked very fast, her face was much flushed, a *tâche cérébrale* could be readily elicited, and meningismus was present.

She entered hospital, and was detained for three months, during which time the lethargy continued. At the end of two months she was tried up, and it was observed that she had difficulty in walking, due to right-sided paresis. Drugs and electrical treatment were of no avail.

In July, 1921 (fifteen months from onset), she began to complain of difficulty in swallowing, especially solid food—it "seems to stick."

Salivation has been continuously troublesome. She has become very slow in her movements.

Before her illness she was bright, sociable, and energetic. She was clever at school, and took prizes. At business she was capable, and occupied a responsible position. She is left-handed.

Present condition.—She is pale. She lies motionless in bed in the recumbent position for hours on end. The face is expressionless. The eyes are widely open and seem to stare, remaining motionless for long periods. The voice does not rise above a whisper, and her answers are usually monosyllabic. She displays a lack of appreciation of the seriousness of her illness. She feels fairly happy. Before her illness she was inclined to be emotional, but now she is not moved either to laughter or tears. In short, the emotional abnormality is a striking mental feature.

Her memory, recent and remote, is accurate. Orientation is correct, and simple calculation is smartly performed. Her attention during examination is well sustained.

Physical condition.—The right pupil is larger than the left. Both are slightly irregular and eccentric. They react actively to light, but accommodation is sluggish. There is strabismus, the right eye looking slightly outwards. Convergence

fails to occur in the right eye, but conjugate movements are not interfered with. The visual fields are normal. Photophobia and lacrymation have been present at times. The acuity of hearing (watch test) is diminished on both sides. Air-conduction in each case is better than bone-conduction. Odours are perceived, but not discriminated. There is a generalised paresis, with rigidity, especially affecting the right arm and leg. The tendon-jerks are all exaggerated, especially on the right side.

Babinski's sign is present on the right. A slight degree of ankle-clonus can be elicited on the right side. Some degree of contracture has occurred in the right hamstrings, and there is a beginning right pes equinus.

There is some tremor of the tongue.

There is a coarse tremor of the right upper limb on movement. All movements are performed with extreme slowness. No disturbance of general cutaneous sensation is apparent.

Comment.—The onset, with fever, headache, drowsiness, ptosis and diplopia, is practically diagnostic of epidemic encephalitis.

The early excitement and insomnia is in contrast with the subsequent condition—hypersomnia.

The early palsies have largely disappeared, and been replaced by dysphagia (fifteen months after the onset) and generalized palsies of the limbs. This is important for the prognosis of similar cases.

The mask-like countenance, and the general immobility and rigidity and slowness of movement, make this case worthy of inclusion in a pseudo-Parkinsonian group. In addition, bulbar symptoms (dysphagia and dysarthria) are prominent.

The mental change is chiefly in the emotional sphere and is distinctive.

There is an emotional blunting, amounting to apathy, but combined with this is a feeling almost of well-being and of optimism regarding her future. This last seems to indicate a deterioration in the intellectual sphere as well—a lack of judgment. No other intellectual defect was elicited.

CASE 9: Comment.—This patient first became ill at the age of 34—thirty years ago—with great motor excitement, incoherence of speech, sleeplessness, and (after a few weeks) resistiveness. The description is too meagre for differential diagnosis, but the condition may have been one either of delirium or maniacal excitement. The stage of excitement lasted about four weeks, at the end of which time the description suggests a delirium, chiefly nocturnal. The “noises in the head” were apparently not hallucinations; they may have resulted from irritation of the eighth nerve.

Three months from the onset she had passed into a stuporose condition, which lasted for nearly six months. This gave way to an apathetic depression (of which the apathy was the more prominent feature apparently), with psychomotor retardation and lack of initiative. There was no trend, and no disorder of thought. This condition persisted for at least a year; she then improved con-

siderably for five years, but at the end of that time relapsed into her former apathetic adynamic condition, which has gradually increased until finally she has returned to a stuporose condition, in which—thirty years after the onset—she remains mute, apathetic, adynamic, resistive. Moreover there is present a Parkinsonian syndrome.

Differential diagnosis.—There is, of course, no history of initial pyrexia, and at this distance in time it is not possible to obtain details. But such a history is often absent even in authenticated cases of epidemic encephalitis.

The clinical records are too scanty for certainty regarding the type of excitement, but there is nothing to indicate that it was not a delirium. If the excitement were to be regarded as manic-depressive in type, numerous difficulties would be met with: there was no previous attack, and no recurrence; the subsequent stage was characterised by apathy more than by depression, by absence of volition rather than impediment thereof. There was a recovery—apparently only partial—for a period of five years, followed by an apathetic and latterly stuporose condition which has lasted twenty-four years. The whole course is, in fact, remarkable, and foreign to the picture of manic-depressive insanity.

She has displayed none of the symptoms characteristic of catatonic conditions—she has been resistive, but not negativistic; she has never been impulsive or grimacing.

The Parkinsonian signs are now very obvious; they raise the question of arterio-sclerosis. The radial vessels are not unduly thickened for her years, and the heart is not enlarged. The urine is normal; the blood-pressure is 170 mm. Hg. There are none of the cerebral complexes present (*vide* Case 3).

Finally, the resemblance this case bears to authentic cases of epidemic encephalitis is very close, and the presumption on a review of the evidence that it is a sporadic case of the disease seems justified.

The case is specially interesting because of its atypical course (as above described), its long duration, the accompanying Parkinsonian syndrome, and its marked resemblance to certain residuals of epidemic encephalitis, and consequently its bearing on the prognosis of chronic cases of the latter.

CASE 10: *Comment.*—This case occurred in a young, nervous adult during an epidemic of encephalitis.

There was a preliminary stage of excitement, with sleeplessness, cranial nerve signs (irritation of seventh, paralysis of third), and pyrexia.

On the third day myoclonus appeared. There were pyrexia and delirium. These were followed by drowsiness (lethargy), from which

he could be aroused, when he talked rationally. The early palsies were evanescent, and the reflexes were changeable.

Improvement in the mental condition occurred on the eighth day, and persisted.

There was a slight relapse five weeks after the onset. The condition of the throat, the laryngitis and the otorrhœa are noteworthy. The presence of the latter suggests the possibility of meningitis or cerebral abscess. But there were no headache or vomiting, and no slowing of the pulse or subnormal temperature at any time.

He recovered up to a point, but paresis of the left side has persisted, and the clinical picture has changed. There is general immobility; the face is expressionless, the eyes are more or less fixed, and the limbs and trunk are seldom moved except on command. His movements are slow. Intention tremor is present in the left arm. There is a certain degree of *flexibilitas cerea*. In brief, the pseudo-Parkinsonian syndrome is fairly well marked. On the mental side the early excitement was followed by delirium and then by lethargy. The drowsiness has passed off, but a total lack of interest has followed, with almost complete loss of emotional reaction and of volition, but with clear intelligence and apparent insight.

The apathy and the absence of spontaneous movement, depending on apparent lack of volition, give this case a superficial resemblance to dementia præcox. But the intelligence is unimpaired, there is no "splitting" of consciousness, there are no bizarre ideas, and he realises that he is ill. There is no negativism, stereotypy, impulsiveness or grimacing. Moreover, such a diagnosis takes no account of the numerous and well-marked physical signs, and the very definite history of the illness. Finally, the resemblance of this case to several of those recorded above is too close to be ignored.

The case is specially interesting because, months after the onset, the patient has been placed in an asylum, and because of its superficial resemblance to, and diagnosis as, a dementia-præcox type of reaction.

[I desire to acknowledge my indebtedness for permission to record cases and for their encouragement and advice to Prof. Stockman, Prof. Monro, Dr. G. H. Clark, Dr. Walker (of Paisley), Dr. A. G. W. Thomson, Dr. Whitelaw, Dr. Carre, and especially Dr. D. K. Henderson, Physician-Superintendent of the Glasgow Royal Hospital.]

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(²) It is interesting to note, in relation to the emotional disorder in the present series, that one of these cases was apathetic, the other excitable and suspicious.

The Diagnosis of Dysenteric Infections in Mental Hospitals. By
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tendent, The Maudsley Hospital, Denmark Hill, London.

THE diagnosis of dysentery is a matter of considerable administrative importance in mental hospitals.

In its acute form the diagnosis is comparatively easy, either clinically or by pathological methods, but the real problem is the recognition of very mild forms and of chronic and latent cases. These latter cause trouble by providing the foci of infection which lead to recurrent attacks of the acute disease. In such cases the laboratory may be most useful, but here the matter may be more difficult, and there are distinct limitations.

NON-DYSENTERIC DIARRHŒAS.

Before discussing the true dysenteries I will first consider briefly some of the *non-dysenteric diarrhœas* which may occur. Acute diarrhœa may occur during the course of Graves' or Addison's disease, and as an initial symptom of appendicitis, but these should cause little trouble in diagnosis. Some of the causes of acute gastrointestinal irritation may present more difficulty.

Undetected poisoning from *drugs* causing intestinal irritation are, owing to their limited opportunities, rarely seen among the insane. I have observed a troublesome diarrhœa in chronic excited cases who have taken considerable quantities of sedative drugs, particularly sulphonal. This is possibly due to irritation set up by a retention within the gut of a considerable quantity of this insoluble drug.

The diarrhoea induced does not suggest a dysenteric lesion, and its nature is obvious.

Dietetic cases.—Vomiting and diarrhoea are not uncommon following the injudicious feeding which patients may indulge in, however carefully watched. Material brought in by visitors, such as unripe fruit, tinned and other slightly putrid food may produce intestinal irritation, and even symptoms of the so-called ptomaine poisoning. Apart from actively poisonous vegetable material, similar intestinal disturbances may occur from patients eating leaves and other material which a certain class of case is liable to eat.

Several organisms cause gastro-intestinal disturbances which may resemble dysentery. Those requiring special mention are: *B. enteritidis* of Gaertner, *B. paratyphosus* "B" and *B. Aertryck*, *B. Morgan*, *B. enteritidis sporogenes*.

The last-named occurs in normal faeces, and as originally described is almost certainly a mixture of two anaërobic organisms which obtained prominence in the war owing to their association with the complication of wounds known as gas-gangrene. They exercise a disintegrative action on protein and carbohydrate, and there is no reason to suppose that they are causal agents, although they may be more evident in putrefactive conditions in the gut.

The *B. enteritidis* of Gaertner and the Aertryck bacillus and *B. paratyphosus* "B" are closely allied and have similar cultural reactions. The first two are food-poisoning bacilli, and produce acute gastro-intestinal irritation, but as far as I know, cases have not been identified among the mental hospital population. The *B. Aertryck* is probably identical with the hog cholera bacillus, or *B. suispestifer*, an organism found in, but presumably not the cause of swine fever, a disease not uncommon at times in mental hospitals. *B. paratyphosus* "B" is very closely allied, and can only be differentiated by absorption tests. This organism usually causes a disease resembling typhoid fever; at times, however, *B. paratyphosus* "B" causes symptoms of intestinal irritation which closely resemble those of dysentery. In an outbreak in a mental hospital two cases occurred simultaneously which were identified by agglutination reactions, and in one case *B. paratyphosus* "B" was isolated from the blood. One of these cases was clinically indistinguishable from typhoid fever, and the other showed an occasional slight pyrexia, and an acute diarrhoea, lasting for five days. Similar cases occurred during the war, and were labelled dysentery until their true nature was shown by bacteriological investigation.

The Morgan bacillus has been isolated in outbreaks of dysentery in mental hospitals and elsewhere, and it must be considered as one of the causes of dysenteric diarrhoea.

In considering cases of chronic diarrhœa those in which mucus occurs are most liable to cause confusion, but it must be remembered that dysentery infection may still be present without evident mucus.

The chronic diarrhœas from impaired gastric and pancreatic digestion should not cause trouble. In the first the diarrhœa occurs in bouts, and the motions may show undigested muscle-fibres, while in the pancreatic cases the large, offensive fatty stools are characteristic.

Fæcal impaction.—The constipation which occurs at times in the insane may result in a large accumulation of fæces, which when relieved may be followed by the evacuation of small quantities of fæcal matter accompanied by mucus. There is, however, seldom pyrexia, and the nature of the case is usually obvious.

In cases of *new growth* of the gut, blood and at times mucus may occur, often accompanied by alternating constipation and diarrhœa. This condition may require careful differentiation.

Diarrhœa may result from *chronic catarrh* of the small and large intestine. Such catarrh may be due to cardiac or renal disease, and other causes, such as cirrhosis of the liver.

Chronic tubercular diarrhœa.—In this there is pyrexia and diarrhœa. The stools are usually yellow in colour and are frequently abundant and pultaceous, but they may be fluid and resemble those of typhoid cases. Blood and mucus are not usually present. The diarrhœa may be an early symptom, but is usually late and is associated with marked tuberculosis in the lungs. Ulceration occurs in the small intestine, as well as being particularly marked in the large intestine. Pathological diagnosis may be difficult owing to the presence of other similar acid-fast bacilli in the stools.

These cases may be particularly important, as there may be in some cases an infection of bacillary dysentery associated with the tuberculous lesion, and this, if not recognized, may cause an outbreak of dysentery.

Cases of *nervous diarrhœa*, in which the bowels act after a meal, or from emotional causes, are rare in the mental hospitals, and the condition does not suggest dysentery.

True mucous colitis, in which large quantities of mucus may be extruded at times as a tubular cast, occur in neurotic and hysterical cases. It may be associated with abdominal pain, but in my experience it is distinctly uncommon in mental hospitals.

A non-dysenteric ulcerative colitis of unknown origin is described clinically and pathologically, resembling dysentery, but, particularly in mental hospitals where dysentery is present, it should not be diagnosed until every effort to prove the infective nature of the disease has failed.

Tropical diarrhæa, such as sprue or hill diarrhœa, can be excluded in mental hospitals in this country.

THE TRUE DYSENTERIES.

Coming to the true dysenteries, we can practically exclude at once the tropical dysenteries due to such causes as *Balantidium coli*, bilharzia and other parasites as being unlikely to occur in mental hospitals.

True dysentery is divided into two groups, *amœbic* and *bacillary*—sharply divergent in ætiology and treatment, but often not so clearly differentiated clinically. Fortunately the amœbic form is rare in mental hospitals, and has not, so far as I know, been the cause of any considerable outbreak, although the presence of this form has been described by competent observers.

Possibly it is commoner than is supposed, as few protozoologists have systematically investigated mental cases, and there are few investigations for which it is more essential to have experienced expert observers. Malins Smith (1), in an investigation of asylum subjects, showed a percentage 9·7 as infected with the pathogenic *Entamœba histolytica*, this comparing with 4 *per cent.* and 8 *per cent.* found in healthy subjects in the general population. The total finding of protozoa was distinctly high, particularly in regard to the harmless *Entamœba coli*; the reason that is suggested for this is the dirty habits to which mental patients are liable. The same observer found the *Entamœba histolytica* in 3 out of 60 cases of active dysentery examined, and G. A. Watson (2) records similar findings also at Rainhill. Fortunately, however, amœbic dysentery is certainly not the usual cause of asylum dysentery, and the numerous points of differentiation between amœbic and bacillary dysentery hardly come within the scope of this paper, but a few of the principal points may be mentioned. It must, however, be remembered that a great authority such as Rogers (3) emphasises that bacillary and amœbic dysentery can only be differentiated with certainty by bacteriological and protozoological examination.

Clinically in the amœbic form the fever is less marked, and is often a sign of complications, and the onset in this form may be more insidious, even in severe cases. In regard to the stools, numerous separate large rosy pieces of blood-stained mucus suggest the amœbic disease, and the presence of red opaque pus-like mucus is also suggestive of this form. White fibrinous masses or small pieces of mucus-like white of egg are suggestive of the bacillary form. This last appearance, flecked with particles of blood, is often seen in the early stages of mild or moderate cases in mental hospitals. The micro-

scopic character of the cell exudates also differs. This has been described well by Willmore and Shearman (4).

In the amœbic disease mononuclear cells predominate, with well-stained nuclei and ragged edges, due to digestion of the edges of the cells. In the bacillary form degenerated polymorphonuclear cells greatly predominate, together with epithelial and endothelial cells, which may be mistaken for amœbæ. The appearance in the affected gut also differs. In the amœbic form the edges of the ulcers are undermined, owing to the spread of the disease in the submucous coat, and the affected areas stand up from the areas of healthy gut; while in the bacillary disease the area involved is more uniformly affected with depressed areas in a generally thickened gut-wall. A fibrinous exudate on the necrotic mucous membrane is sometimes described as a diphtheritic form of bacillary dysentery, and this is seen at times in mental hospitals.

The differentiation between the pathogenic *Entamœba histolytica* and the non-pathogenic amœbæ is almost a science in itself; special points are the character of the pseudopodial movements, the inclusion at times of blood-corpuscles within the *Entamœba histolytica*, and in the encysted stage the quadrate nucleus. Examination of fresh uncontaminated specimens is of course essential, and for the inexperienced confusion with epithelial and other cells and even food remnants is easy.

Rogers describes three forms of amœbic dysentery—

- (i) the acute fulminating,
- (ii) the ordinary average case,
- (iii) mild cases,

and bacillary dysentery may be similarly divided.

In describing bacillary dysentery in the mental hospitals, Sir Frederick Mott (5) divides the cases into eight clinical types. The first two are acute cases liable to end in death, in the first of which the initial temperature is more or less maintained, and in the second of which the temperature falls as collapse supervenes.

The third and fourth types represent milder cases. In one there is a mild fever to 101° or 103°, with blood and mucus for a few days to a week or longer; in the other a slight or no pyrexia with blood and mucus for about two days. The fifth type are relapsing cases of a varying degree of severity.

The sixth type are cases which become chronic, and which intermittently pass stools containing blood and mucus for months.

The seventh type are cases of intermittent or prolonged diarrhœa, in which blood and mucus are not observed, but they are undoubted cases of dysentery, and *post-mortem* lesions may be found.

The eighth type are those which are associated with tubercle.

The diagnosis of acute forms calls for little comment. The cases are acutely ill, and apart from rare confusion with typhoid or other acute diseases owing to blood being added to the stools from causes such as piles, are unlikely to cause confusion. In England cases of cholera and acute amoebic dysentery are unlikely. Cases of moderate severity are usually most characteristic.

Cases associated with tuberculosis are troublesome, and may, by being overlooked, cause trouble in initiating a fresh outbreak.

Apart from the possibility of the chronic carrier, the essential trouble in mental hospitals is in the diagnosis of mild cases generally, and particularly of recurrent cases in their milder forms. Chronic cases which may pass blood and mucus intermittently for months also cause trouble, and more difficult still are the cases in which an intermittent diarrhoea without naked-eye blood or mucus is the only symptom. These are the cases which cause the recurrent outbreaks which occur in mental hospitals; and here bacteriological and serological aid may be useful. The limitations of such aid must, however, be realised. In the early stages bacteriological diagnosis is comparatively easy. C. J. Martin and Williams (6) published a series of cases illustrating this point, in which the curve of positives fell from 68 *per cent.* in the first five days to 17 *per cent.* in the next five days, and then to 6 *per cent.* and 3 *per cent.*

Fresh material is also essential. Dudgeon (7) quotes 26 cases, which, when examined fresh, gave 25 positives and 1 negative. The same stools examined after ten hours gave 15 positives and 11 negatives, while by adding alkali to prevent the reaction becoming acid 19 positives were obtained. Similar tests in subacute and chronic dysentery showed 14 out of 21 positives in fresh material, which were reduced to 4 out of 21 on standing ten hours.

Instructions to send all fresh specimens at once to the laboratory, and to continue to send such specimens for the first three days or until a positive finding is returned, will increase the number of positives returned to a very high percentage in acute cases. Waiting for two or three days until a laboratory report is sent, in the event of a first failure, often allows the period to pass in which isolation of the organism is easy, assuming reasonably good technique. If the whole specimen is not sent, suitable material must be selected, blood-stained mucus being particularly suitable. Instructions on these lines will do more to increase the positive findings than any are on the part of the bacteriologist. Easy and rapid transit to the laboratory is, of course, essential. A distant laboratory with specimens arriving late will not get satisfactory results.

The principal bacilli which occur in bacillary dysentery are the Shiga bacillus and the Flexner bacillus. The former usually causes

the more severe type of disease, but the Flexner bacillus is the common organism found in asylum dysentery, and it tends more readily to disappear from the stools.

The Shiga bacillus forms a fairly definite group ; the sugar reactions are usually constant, and a bacillus agglutinating to the standard Shiga serum can be accepted.

The subject is far more complicated when dealing with the Flexner group of dysentery bacilli, and the absorption-work of Gettings (8), of Wakefield and of Andrewes and Inman (9) did much to clear up this matter.

While the toxin and cultural characteristics with slight variations are the same, the different strains of Flexner bacilli will often not agglutinate to serum prepared from another strain. 116 strains have been taken, the great bulk of which were divided into five races of strains, and a mixed polyvalent serum has been prepared which is issued for use from the Oxford Standard Laboratories. These five races are called V, W, X, Y and Z. Emulsions of these strains are issued, which can be used for ascertaining the agglutination of the patient's blood.

Another point is that certain prepared Flexner sera will, if used in a state of concentration, agglutinate some coliform organisms ; thus, for certain diagnosis all isolated bacilli should have their simple biochemical reactions (sugars, etc.) tested, and their agglutination tested in a proper dilution.

Owing to the difficulty in obtaining positive results in the chronic stage of dysentery, help may be sought in agglutinins which appear in the blood in dysentery, as in typhoid. One source of confusion has been the variety of the antigens or emulsions of bacilli used by different workers. Different strains vary in the degree to which they will agglutinate to the same serum, and generally speaking the same strain becomes much more easily agglutinated after repeated sub-culture. To obviate this Prof. Dreyer established the Oxford standard cultures, and expressed his results in standard agglutinin units. A figure is given with each emulsion of bacilli issued which, when divided into the degree of agglutination found with any serum, gives results comparable with any other emulsion similarly standardized.

During and after the disease in both Shiga and Flexner dysentery, the blood of the patient may show a gradually increasing power of agglutinating the corresponding organisms, and this may be expressed in the form of a curve. This curve does not usually start until the end of the first week or fortnight from the onset, and may be delayed until near the end of the first month. This agglutination may rise to a high maximum, and gradually fall to normal by the end of the third month or a little later. Such a curve of changing degree of

agglutination indicates in dysentery, as in typhoid, the existence of the active disease. Moodie and Dawson (10) worked out a number of such curves in mental cases affected by Flexner dysentery.

Apart from its late development, if such a curve occurred in all cases the diagnosis would be easy; but in a considerable number of cases such agglutination only develops to a slight extent, and in some cases it is completely absent; further agglutinins to dysentery may appear in normal blood.

The great point to determine in diagnosis by agglutinin tests is the standard to be taken as to what is normal, and what is to be taken as evidence of past or present infection. After adopting a lower standard, the Oxford workers have now taken as being within normal limits a standard of 10 agglutination units for men and 20 units for women; this might, of course, be a dilution of 1/50 and 1/100 according to the index figure. Ritchie (11) and other workers, using an antigen not relatively standardized, suggested 1/32 for Shiga and 1/128 for Flexner. My own experience of Shiga agglutinins is too limited to express an opinion, as the cases of asylum dysentery I have investigated have been infected with Flexner bacilli, and my experience of Shiga dysentery occurred at a time when it was seldom possible to investigate agglutinin reactions. The general impression I have formed is that Shiga agglutinins usually occur to a comparatively slight extent in normal blood, and that in infected cases agglutinins develop beyond the normal limits during the active disease, and that such agglutinins occur in a high percentage of cases.

In two series quoted in the *Medical Research Report*, No. V, 95 *per cent.* of cases showed positive results between the tenth and twenty-fourth days of the disease, and in a smaller series of 96 cases, 100 *per cent.* showed positive agglutination between the eighth and tenth days.

The following observations on the variable agglutinations found in cases of Flexner dysentery are based on joint work done by Capt. S. Mann, B.Sc., and myself, the details of which we propose to publish shortly. The cases were mostly males from Claybury Mental Hospital, and the disease was generally of mild or moderate severity.

Three classes of case were taken: (i) those with no history of dysentery, (ii) cases with a history of dysentery, and (iii) cases of acute dysentery.

In the cases with no history of dysentery agglutination was present in 28 *per cent.*, but only in two instances to an extent considered pathological, and in these cases the possibility of previous infection could not be absolutely excluded.

In the cases with a history of dysentery, 60 *per cent.* showed agglutination, 30 *per cent.* within normal limits, and 30 *per cent.* to a

pathological extent, and less than half of the latter showed a high degree of agglutination. In none of these cases were organisms isolated on repeated examination of the fæces.

In a small number of cases of acute dysentery investigated, 60 *per cent.* only developed agglutination to an extent considered pathological, 20 *per cent.* developed agglutinins within normal limits, and 20 *per cent.* developed no agglutinins at all. Two other cases showed no agglutinins between recurrent attacks, but may possibly have been reinfections.

The relations of the agglutination found to the strain of organism isolated is also complicated, but is beyond the scope of this paper.

The deductions from this work are that adopting the Oxford standard as to normal agglutination, an occasional case may be suspected of dysentery without adequate basis, but these will be so few in number as to be safely ignored. On the other hand, 40 *per cent.* of the cases will not be diagnosed by this method, and in 20 *per cent.* no suspicions will be aroused.

Comparing the normal cases with those having a history of dysentery, in each about 30 *per cent.* showed agglutination to normal limits; but those previously infected showed in addition a further 30 *per cent.* with agglutination to a pathological extent, and in such cases repeated bacteriological examination is indicated, but a proportion of cases retaining persistent agglutinins in the blood do not appear to be infective after careful examination.

The practical points I would deduce are that while serological investigation may assist in indicating infection, it will do so only in a proportion of cases. Further, unless a normal standard is taken, the work involved will be immense, but taking such a standard increases the possibility of overlooking infected cases.

Bacteriological examination is more fruitful, and it is particularly useful in indicating cases which are becoming chronic, or which may be recurrent. Two cases I investigated showed the importance of this. In the one case Flexner bacilli were isolated at frequent intervals for nine months after the acute attack, and the patient's clinical symptoms were slight, and could easily have been overlooked. In the other case there was no history of the disease, and no clinical signs, but the organism was found, and confirmed by the serological reactions. The record showed only a slight attack of diarrhoea nine years before.

The necessity for the detection, isolation and treatment of such cases is obvious, and in later stages may be difficult and require much work. By a routine examination of all such cases at the time of, and in the period just following the disease, such cases can be prevented from becoming a source of general infection. The material

required for such work is comparatively simple, and diagnostic sera, etc., are provided free by the Standard Laboratory at Oxford. The expense and trouble is soon repaid in the decreased incidence of the disease.

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General Paralysis : its Unsolved Problems.⁽¹⁾ By R. M. STEWART, M.D., M.R.C.P.Edin., D.P.M., Medical Superintendent, Leavesden Mental Hospital, Herts.

THERE is probably no disease in regard to which our views have undergone so radical a change during the past few years as general paralysis of the insane, and none in which the discovery of the causative agent has been followed by so rapid a revolution in standpoint. Although almost from the time of its definition, more than a century ago, the essentially organic nature of the disease and its close relationship to syphilis have been universally recognized, it has required many years of patient study to free it from the hypotheses which have been invoked to explain its obscurities, and, as always happens in scientific progress, in the process of unravelling the knotty problems of this disease, we discover that there are new obstacles and difficulties to be overcome. Is the *Spirochæte pallida* alone responsible for the genesis of general paralysis? When does it gain access to the nervous system, and how? Is there a special strain of spirochæte, or must the individual resistance of the infected person be considered the deciding factor in the development of the disease? What is the meaning of the long latent interval before the onset of symptoms? What determines the peculiar distribution of the lesions in general

⁽¹⁾ A paper read at the Annual Meeting held in London, July 10, 1923.

paralysis, and is there some particular place in the brain from which the spirochæte starts its wandering? What is the significance of the absence of spirochætes in other organs of the body, and why does the cerebro-spinal fluid contain no organisms at a time when the brain contains millions? Why do tabes, general paralysis and optic atrophy, supposedly of similar origin, not occur in conjunction more frequently? Why is it that arsenical compounds fail to effect a cure?

These are a few of the problems which confront us, and since it will be impossible within the limits of a short paper to enter fully into the answers which have been given, I shall restrict myself to two of the questions which have lately aroused considerable discussion—the time of invasion of the nervous system in general paralysis, and the question of the existence of special neurotropic strains of the *Spirochæte pallida*.

THE TIME OF INVASION OF THE CENTRAL NERVOUS SYSTEM.

It is well known that the period of time intervening between the date of infection and the onset of neurosyphilis varies for the different types of disease: in cerebro-spinal syphilis it is seldom more than three years, in general paralysis it is seldom less than six to ten years, and in tabes the time interval is usually considerably longer. Time, therefore, is one of the essential factors in the development of neuro-syphilis, and by reason of its practical importance completely overshadows all other questions; for, until it becomes possible to be reasonably sure of the time-limits within which the spirochæte gains access to the nervous system, the prevention of neuro-syphilis will remain an almost hopeless task.

The precise significance of the latent period has long been a subject of conjecture, and no entirely satisfactory solution has been put forward.

According to one view the delayed onset of nervous lesions in syphilitic subjects is brought about by the passage of toxins along perineural lymphatics from some peripheral focus. Long before Noguchi's discovery of the *Spirochæte pallida* in the brain cortex, Orr and Rows (1) suggested that the lesions of general paralysis were due to the presence of toxins in the cerebro-spinal lymph, and from an experimental study of lymphogenous infection of the nervous system they concluded that infection of the lymph-stream of nerves played an all-important part in the origin of this disease. In the case of syphilis, however, it seems more than doubtful whether a toxin, no matter how potent, could bring about such a profound lesion; and, since we now know that in general paralysis we are dealing with live organisms and not their toxins, the theory of Orr and Rows

must be modified to this extent—that for toxin we must substitute virus.

As early as the period of the primary sore the spirochæte has been found lying in perineural lymphatics, and it must be admitted that, in the secondary stage when the skin is the seat of innumerable colonies, there is abundant opportunity for the virus to gain access to the peripheral nerve-trunks, and then to ascend by an easy and direct path to the nervous system. Owing, however, to the very marked motility of the spirochæte, it is questionable whether its discovery in the nerves of the skin was anything more than a coincidence; and it is significant that the most painstaking search for the spirochæte in the peripheral nerves in general paralysis has always yielded negative results.

Then, again, it may be objected that there is no source for this virus save during the period of secondary manifestations when the skin is infected, and it seems hardly possible that a chronic lymphogenous infection of the nerves can exist during the whole interval of time between the secondary period and the onset of general paralysis without producing obvious symptoms.

Lastly, if the spirochæte reaches the brain by the lymphogenous route, it might be anticipated that the position of the primary lesion and the severity of the skin eruption would influence the period of onset of the disease. Inquiry shows that this relationship does not exist; cephalic or digital chancres are not more prone to be followed by general paralysis than are genital chancres, and strangely enough a florid eruption seems actually to protect the individual against the disease.

As far as I am aware, Weygandt and Jakob (2) are the only investigators who have used the specific organism itself in attempting to solve this problem, but unfortunately their results are not altogether conclusive. By injecting syphilitic material into rabbits they were able to produce changes in the nervous system in about 50 *per cent.* of the animals, but the inflammatory lesions were the same whether they were from a localized testicular or a generalized blood infection.

If we reject the view that infection of the nervous system takes place by the lymphogenous route at a late stage of syphilis we must fall back on the other possibility, namely, that the spirochætes circulating in the blood-stream gain access to the brain or its membranes during the period of general dissemination, and lie dormant in these situations awaiting a favourable opportunity for their multiplication. This conception of an early infection of the nervous system in general paralysis is, of course, by no means new, but in recent years it has received additional support from studies of the biochemical and other changes in the cerebro-spinal fluid, which are

of such importance that I must ask permission to review the evidence in considerable detail.

Before doing so, however, I would like to refer to certain facts in regard to syphilis which have a direct bearing on this subject.

First of all it is instructive to note how the tissues behave in response to the entrance of the organism. When spirochætes are inoculated on a mucous or cutaneous surface they excite a rapid multiplication of tissue-cells, and a migration of lymphocytes to the affected area, with the result that after a period of three or four weeks the Hunterian sore makes its appearance. This local formation of granulation-tissue is probably a defensive reaction on the part of the host, designed to check the growth of the organisms, and is the first indication of an altered state of immunity in the body. At this period, too, the blood seems to possess powerful spirillicidal properties, for experiment has shown that when infected material is injected into the tissues or blood-stream the spirochæte is rapidly destroyed. Soon, however, the blood loses its spirillicidal power, and the organisms are free to pass through the lymphatic vessels and thoracic duct into the general circulation. The disease has now become generalized, spirochætes invade every tissue of the body, and the patient suffers from a spirochætal septicæmia.

There seems no reason to suppose that at this stage the nervous system is spared, and, as I shall presently show, recent work in this and other countries makes it abundantly clear that the nervous tissues are infected in a very large percentage of cases.

Towards the end of the stage of secondary manifestations another and equally important event takes place, namely the spontaneous disappearance of the objective and subjective symptoms; the skin eruption gradually fades, headache and pyrexia cease, and the patient recovers his former good health. The logical explanation of this phenomenon would appear to be that the body manufactures antibodies, or immunizing substances, which have a deterrent or lethal effect on the organism. Up to the present no satisfactory proof of the presence of such substances exists, but in any case we must admit that the pathogenic action of the spirochæte is diminished to such an extent that it is permitted to remain latent in the system for many years. Just what latency means in this instance has not been demonstrated, but it is highly probable that there is established a more or less enduring equilibrium between the attacking forces of the spirochæte and the defensive forces of the body. Clinically, this type of latency is well illustrated in the so-called Colles's law, which postulates that a woman bearing syphilitic children (and herself presenting a positive Wassermann reaction), may show no signs of syphilis. Now this balance between the spirochætes and the cells

of the host may be upset when any change occurs which lowers vitality or adversely affects the general well-being of the individual, and, as we know, only too frequently signs of active syphilis reappear in the late stages of the disease. In regard to the factors which determine sites of exacerbation in tertiary syphilis there is considerable uncertainty. It is possible that there exist in the body certain localities, more or less sheltered from the blood, which offer a safe resting-place for the virus, and that from these foci spirochætes are attracted to areas of the body whose resistance have been lowered. It is more probable, however, that the sites of tertiary manifestations are governed by an accidental localization of the organism during the early stage of the disease, and if this be so, the predilection of the spirochæte for certain localities can only be explained on the assumption that such areas are more exposed to stresses than other parts of the body. A striking demonstration of the prevalence of latent syphilis is to be found in the pathological studies of Warthin.(3) He examined organs from patients who died at a time when all clinical manifestations of syphilis had disappeared, and was able to demonstrate colonies of spirochætes in various parts of the body. The lesions consisted of a low-grade chronic inflammation with lymphocytic infiltration, and were most often found in the heart. Although active foci of spirochætes could not be discovered in the nervous system, the meninges in all cases showed some signs of thickening, and when investigated microscopically the changes bore a marked resemblance to those seen in general paralysis, the difference being principally one of degree. Minute lesions such as occur in other syphilitic organs were found in the brain substance itself. From the pathological standpoint a cured case of syphilis was never seen, and Warthin concludes that every syphilitic remains a spirochæte carrier for many years, if not for life. Urechia's (4) investigations yielded results of a similar character. His patient succumbed to an aortitis with involvement of the coronary arteries of the heart. Microscopic examination showed meningitic plaques, syphilitic endarteritis, and discrete perivascular infiltration in a few areas. In the cerebrum a small area of gliosis was discovered resembling those which recent studies have shown to be common in the general paralytic's brain. These investigations are very instructive, since they have some bearing on recent experimental work on latency. Engman and Eberson (5), studying the prevalence of latent syphilis by the application of the Wassermann reaction, found that 15 *per cent.* of their patients were definitely latent, and that in some the spirochæte had retained its virulence for many years and was capable of producing typical syphilitic lesions in the testicles of rabbits.

Now if living spirochætes may be found in the lymph-glands of

persons with no objective signs, and clinically free from the disease, is it not possible that they may also hide in the remote fastnesses of the nervous system? The occasional presence of neurological signs, such as the Argyll-Robertson pupil or optic atrophy for many years before the onset of general paralysis or tabes, suggests that this possibility must be seriously entertained. Consider also the general paralytic whose disease is in a remission. In his case the spirochæte has at one time been present in the brain in sufficient numbers to cause serious mental disturbance, but its action having become repressed or diminished, the symptoms for the time being cease to progress, and the patient may be capable of resuming his usual occupation. Sooner or later the spirochætes gain the upper hand, and signs of active disease reappear. I have seen a spontaneous remission which lasted five years, and even longer periods have been recorded, so that there are very good grounds for stating that the organism of syphilis may dwell in the nervous system, or, indeed, in any organ of the body for quite long periods.

But further and I think more convincing proof of this contention is to be found in a study of the spinal fluid abnormalities in syphilis, which have been shown by a large number of workers to be frequent in all stages of the disease.

In a series of 624 cases of early unselected syphilis, Fildes (6) and his co-workers found evidence of a meningeal reaction in 29 *per cent.* Of 49 cases of primary syphilis investigated by Van der Valk (7), the cerebro-spinal fluid showed changes in 8, and in a series of 118 fluids from cases of secondary syphilis, 42 were abnormal. Nicolau (8), in a study of 51 cases of primary syphilis, found abnormal fluids in 18. Keidel and Moore (9) state that from 30 to 50 *per cent.* of spinal fluids are pathological in early syphilis, while both Dreyfus (10) and Plaut (11) assert that the incidence is nearer 80 *per cent.*

It will be observed that the figures given by different authors range from 84 *per cent.* to 3 *per cent.*, and this lack of agreement in their findings is doubtless due to the absence of any accepted standard of abnormality. One author may regard an increased globulin content with a cell-count not higher than 10 as sufficient proof of syphilitic involvement, whereas another may only be satisfied with a marked pleocytosis and a positive Wassermann reaction.

Probably it is safe to say that 40 *per cent.* of all syphilitics show early spinal fluid changes, and that this percentage is even higher during the stage of secondary manifestations. This statement does not necessarily imply that in the other 60 *per cent.* the nervous system remains free, for if the number of organisms reaching the meninges is small, or if the cells of the host fail to react, it will naturally follow that there will be no signs of nervous infection, and the cerebro-

spinal fluid will be normal. As every clinician is fully aware, much the same thing may happen in the systemic portion of the body ; during the stage of generalization the patient may develop no signs or symptoms, and in a few cases the Wassermann reaction may even be negative.

Many are convinced that the fate of every syphilitic is determined during the first few months of infection ; if the spinal fluid remains normal it will not be invaded later on, while on the other hand, if early changes make their appearance the physician may confidently expect the development of neuro-syphilis at a later date. It must be observed, however, that this conception of the origin of neuro-syphilis is rejected by many competent observers, who cite instances where patients under observation for long periods have had normal fluids during the years immediately preceding the onset of general paralysis. In reply to this criticism it may be pointed out that even when the signs of general paralysis are well established, the cerebro-spinal fluid does not always show characteristic changes. Variations and fluctuations may be encountered, and on more than one occasion I have seen the spinal fluid of an untreated general paralytic slowly return almost to normal. Moreover, as Head has shown, the cerebro-spinal fluid may be normal in the presence of active brain syphilis provided the disease is limited to the intracranial contents.

It may, indeed, be almost normal, for Valente (12) found living spirochætes in small fragments of brain removed during life from three paralytics whose fluids gave a negative Wassermann reaction.

The question of early involvement of the nervous system has been very fully discussed by Moore.(13) In the first place he notes that the percentage of patients found to have early spinal fluid abnormalities approximates the incidence of late clinical neuro-syphilis. Secondly, he points out that if infection of the nervous system occurs within the first few months of the disease, one would expect a gradually increasing incidence of abnormal fluids, reaching a maximum during the first or second years, and thereafter remaining at approximately the same level. If, on the contrary, invasion of the nervous system takes place at any time the curve of incidence should be a constantly increasing one. In a chart compiled from 480 cases, arranged to show the duration of infection in months at the time of puncture, Moore finds that there is a rapid rise in the incidence of abnormal spinal fluids which reaches its maximum at the end of about twelve months, and thereafter remains at about the same level ; such a finding of course is in favour of early infection.

According to Moore, neuro-syphilis appearing within a year or less of the date of infection may be classified into five clinical groups :

(1) acute syphilitic meningitis, (2) precocious vascular neuro-syphilis, (3) neuro-recurrence in early cases in which treatment has been allowed to lapse, (4) neuro-syphilis manifested by very slight physical signs, and (5) asymptomatic neuro-syphilis in which invasion of the central nervous system is detected only by examination of the cerebro-spinal fluid.

Groups 4 and 5 together constituted 76·6 *per cent.* of all forms of early neuro-syphilis investigated by Moore, and the changes found in the spinal fluids could be classified into three categories: fluids showing slight pleocytosis and slight increase of globulin; fluids showing a higher cell-count, more globulin, and a negative or weakly positive Wassermann reaction; and lastly, spinal fluids in which the changes were of a much more advanced type, the cell-count being very high, the Wassermann reaction strongly positive, and the gold curve of a paretic type. The effects of treatment on these three degrees of abnormality were very striking, for while the abnormalities in Groups 1 and 2 cleared up in practically all cases, those in Group 3 showed practically no improvement, even after 20 or 30 intravenous and intraspinal injections of salvarsan. Moore was able to keep under observation 8 patients belonging to this group, and after an interval of five years two developed general paralysis, a third neuro-syphilis, while the remainder continued to show no symptoms. Such considerations go far to justify the conclusion that the fate of every syphilitic is determined during the first few months of infection.

THE QUESTION OF THE RESISTANCE OF SPECIAL STRAINS OF THE SPIROCHÆTE PALLIDA.

It now becomes necessary to consider another aspect of this problem which is still the subject of much controversy. If the spinal fluid and the nervous system are infected in from 30 to 40 *per cent.* of all cases of syphilis, why does general paralysis only develop in approximately 5 *per cent.* of infected persons? In reply to this question two explanations may be offered.

First, the organisms which attack the nervous system may do so because they possess a special neurotropic action, or secondly the disease may make its appearance because the patient possesses a neuropathic disposition—that is to say, a reactive mechanism which is less efficient to cope with the spirochæte than that possessed by the 95 who escape general paralysis.

Let us consider these two hypotheses separately.

(1) *Neurotropic strains.*—The possibility of there being variations in the biological properties of the *Spirochæte pallida* was first suggested by Noguchi (14), and later made the subject of experimental investigation by Nichols (15), Reasoner (16), Levaditi and Marie. (17) But

before outlining the evidence favouring the existence of special strains of spirochætes, it will be convenient to refer to the clinical records bearing on this point.

At various times groups of cases of parenchymatous syphilis have been reported having apparently a common source of infection, and probably the earliest and best-known example is that of Brosius (18) : seven glass blowers infected by one of their comrades developed chancres of the lips, and of the five who came under observation ten years later, two were suffering from general paralysis and two from tabes.

Erb cites another instance where five men, infected from a common source, all subsequently developed tabes or general paralysis, while Nonne (19) speaks of three friends who, infected by the same mistress, became victims of these diseases.

Another striking illustration of multiple infection from a common source is recorded by Morel-Lavallée (20) : A woman, Martha X—, infected her lover, who died of syphilitic meningitis. A year later X— became the mistress of a student, B, whom she likewise infected. Later she deserted B, and lived with C. B married and had two healthy children, but died of general paralysis. Fifteen years after his infection C died of general paralysis after an interval of nine years. Finally Martha X— left C, and passed on her disease to two more men ; one of these succumbed to general paralysis, the other to a syphilitic psychosis. The importance of these and other cases has been questioned on the grounds that they might be explained by coincidence, and that instances of familial and conjugal general paralysis should be much more common if a neurotropic strain exists. It is notorious, however, that accurate and truthful histories are very seldom obtained, and I do not consider that the paucity of statistical evidence constitutes a serious objection. Only a few months ago I had an experience which shows how easily examples of this kind may be overlooked.

A young woman in the Leavesden Mental Hospital, who was in the last stage of general paralysis, had a history of blindness and ataxia dating from the age of 11. The father stated that the patient lost her mother in 1919, the cause being "neurasthenia, following air raids." However, from Claybury Mental Hospital I learnt that the mother died of general paralysis and that *post-mortem* examination had confirmed the diagnosis. A slight defect in the father's articulation led me to examine him rather closely, when I discovered irregular unequal pupils, facial tremor, and other signs of incipient general paralysis. Here, then, was another striking example of conjugal paralysis which might easily have been missed. Some interesting statistics relating to the incidence of conjugal

neuro-syphilis have been given by Fischer (21), who computed the frequency with which the husbands of syphilitic wives developed general paralysis, and comparing these with the total parietic mortality in syphilis, found a percentage of 10·5 in conjugal paralysis, which, compared with 3·7 *per cent.* for syphilitic men in general, is certainly in favour of a neuropathic strain.

Passing now to the epidemiological evidence, there is first of all the well-established fact that the natives of certain tropical or sub-tropical countries, although sodden with syphilis, rarely develop general paralysis or tabes, and it has been suggested that the rarity of parenchymatous syphilis in these localities can be best explained by the well-established facts of racial immunity. That some other factor must be taken into account is, I think, shown by Christidi's (22) report on syphilis in Persia. In this country syphilis is appallingly common, but fortunately of so benign a character that a few injections of mercury serve to banish its manifestations, and even in untreated cases the Wassermann reaction usually becomes negative by the end of the first year of infection. Among 3,000 cases of syphilis Christidi never found a case of general paralysis, and this in spite of the fact that the Persians are intellectual workers, and use both alcohol and opium. Further, the same benign characters which distinguish syphilis in the natives of Persia are also found when European residents are infected, there being a singular freedom from complications of all kinds, but—and this is the important point—when Europeans resident in Persia contract the disease from outside sources the disease manifests itself in severe form. Thus, out of twenty-two Europeans infected by non-Persian women, two developed general paralysis.

We are thus impelled to the conclusion that neither the influence of climatic conditions nor race immunity can be used to explain these differences, and, as Levaditi and Marie point out, since animals recovering from the African type of relapsing fever are still susceptible to the European variety, it is not illogical to conclude that other spiral organisms, such as the *Treponema pallidum*, may also show analogous variations.

Much has been written concerning the absence of general paralysis in the coloured races, and here again the evidence is suggestive. Lennox (23) points out that in China, although syphilis is three times more common than in America, neuro-syphilis is extremely rare, the incidence being only one-seventh or one-eighth of that in the States, and, moreover, the few patients who do occasionally come into hospital with this disease are found to be usually steamship employees, who derive their infection from European sources.

Coming now to the attempts made to solve the problems of general

paralysis from the experimental standpoint, there is first the observation of Noguchi (24) that certain strains of spirochæte appear notably thinner than others, and that this variation in morphology has some relationship to their motility, infectiousness and cultural characters. The incubation period with the thicker forms is long, and the lesions nodular, hard and sharply defined. With the thinner and more active types large diffuse lesions are produced.

A year after Noguchi published his paper Nichols (25) succeeded in inoculating the testicles of a rabbit with cerebro-spinal fluid from a case of secondary syphilis. The strain isolated in this manner resembled the thick type described by Noguchi, and was thought by Nichols to be a neurotropic variety, but continuing experiments with the same strain, Zinnser (26) found it possible to imitate practically all the ordinary lesions in rabbits obtained by inoculating strains from other sources.

Similar experiments by Steiner (27), Weygandt and Jakob (28) likewise give little support to the claims of Nichols, for they were able to show that a single strain does not invariably produce lesions of a similar character. In 1919 the controversy was again revived by Levaditi and A. Marie (29), who claimed that their experiments gave the final answer to this question. They succeeded in obtaining lesions in the rabbit with blood from a general paralytic, and were able to transfer the strain to other rabbits. Having isolated in this way a virus which they considered to be neurotropic, they next proceeded to compare it with a strain of spirochæte obtained from a chancre—the dermatropic virus—and found that the two show wide differences in their incubation period, in the character of the lesion, and in the progress and virulence of the disease. With the dermatropic strain the incubation period is about fourteen days; the primary lesion is deeply infiltrated and ulcerated, and persists for about three months. It maintains its virulence for apes even after a large series of passages through the rabbit, and continues to be pathogenic for man, although not for the general paralytic. The neurotropic strain has a much longer incubation period, the primary lesion is superficial, and is extremely slow in disappearing, and the virus has no pathogenicity for man or ape. Lastly, the two viruses fail to induce a crossed immunity against each other, for rabbits recovering from the local lesions provoked by either virus are refractory to superinoculation with the homologous organism, but are incapable of resisting the heterologous virus. Hence it is concluded that there is a biological difference between the two strains, and that the human subject suffers from a true specific *syphilis nervosa*. As to whether individuals destined to develop general paralysis are contaminated by a special spirochæte, or whether a special type is created in the

nervous system as the result of a progressive adaptability, is a question Levaditi and Marie find difficult to answer.

While some of the observations cited appear to indicate an original contamination, the authors believe that the two hypotheses are not only perfectly compatible, but rather confirm the theory of a neurotropic virus. Among the numerous strains of spirochæte, morphologically similar, but differing in virulence, which transmit syphilis in civilised countries, there are some which are distinguished by a special tendency to localise in the nervous system. This does not imply that they are incapable of localising in the skin or certain viscera, as otherwise how could they be transmitted from one individual to another by the cutaneous route? But they do seem from the start to have a weak reaction on the skin, as is evidenced by the transitory and mild characters of the symptoms in the patient destined to become a general paralytic.

Although extremely suggestive, these experiments contain more than one possible source of fallacy. First, the differences observed in the two strains are those which can be found between any recently isolated strain of spirochæte, and one which has been kept going by regular passages through an animal for years. Secondly, the neurotropic virus of Levaditi and Marie shows a striking similarity to the *Treponema cuniculi*, the organism of spontaneous venereal spirochætosis in rabbits, for both possess the same degree of virulence, and both cause lesions hardly distinguishable from each other. Consequently the lesions ascribed by Levaditi and Marie to their neurotropic virus may, in reality, have been those of *Spirochæte cuniculi*. In their first paper this possibility was overlooked, but they have since returned to the question, and now claim to have established a complete lack of relationship between the two organisms.

It must be understood that these authorities recognise only two diseases—general paralysis and tabes—as conditioned by the activity of the neurotropic virus, all other forms of neuro-syphilis in their view being caused by the dermatropic virus, and the infrequency of syphilitic meningitis, cranial nerve palsies and so on in general paralysis lends some support to their contention. Presumably in those rare cases in which meningo-vascular and parenchymatous lesions co-exist, the neurotropic strain must be present in symbiosis with the parasite of ordinary syphilis, and moreover, without some such hypothesis it would be impossible to explain the occurrence of different types of syphilis in a family of congenital syphilitics, one member of whom, free from nervous involvement, may have the Hutchinsonian facies, while another, free from all stigmata, may be suffering from general paralysis.

So far I have dealt with the evidence supplied by the proponents

of neurotropism. It remains now to consider the alternative hypothesis of tissue predisposition.

(2) *Tissue predisposition*.—From this aspect it is considered that general paralysis owes its origin to the action of a spirochæte on cells which have become sensitised by certain methods of treatment, or which possess some inherited peculiarity. Fournier (30) appears to have been the first to note that the initial infection is often peculiarly benign in the future general paralytic, and arguing that such cases would be likely to receive inadequate treatment, he advanced the view that insufficient treatment might play some important part in determining the onset of this disease.

Without committing oneself to any definite hypothesis, it may be supposed that the injection of salvarsan during the period of secondary manifestations kills all the organisms in the skin and systemic portion of the body, and so, by checking the formation of antibodies, cuts off an important supply to the nervous system at a time when it is most needed. From the experimental standpoint there is something to be said for this view, for, as Brown and Pearce (31) have shown, under experimental conditions, subcurative doses of salvarsan render syphilitic animals more susceptible to infection.

With regard to familial predisposition, no experimental data are available, and I shall content myself by remarking that the neuropathic virus cannot possibly be invoked to explain the few recorded instances of families whose several members, after acquiring syphilis from widely different sources, have all developed neuro-syphilis. One of the most striking instances is that furnished by Burrow (32), who had under his care four certain cases of tabes and one probable one among six members of a family who had all acquired syphilis from different sources and at different dates. Three other examples have recently been reported by Kiedel and Moore (33), and careful investigation will probably show that such occurrences are not more rare than the instances of conjugal neuro-syphilis so often quoted by the advocates of spirochæte strains.

Lastly there are a number of pathologists, especially, perhaps, those of the American school, who believe that the key to the understanding of general paralysis is to be found in the reactive mechanism of the host. It has been shown by Brown and Pearce that when the rabbit is experimentally inoculated with syphilis certain groups of tissues tend to become involved in a given order, and that it is possible to produce infection or to confer protection on a given group of tissues according to the nature of the means employed. Thus, by early castration, it is possible to convert syphilis which is usually localised into a generalised disease, or conversely, by permitting the testicular reaction to progress to a given point, to maintain the disease in its

localised form. Further, it is found that when a high degree of protection is produced in other tissues of the body, it is sometimes inadequate for the eyes, and lesions of the cornea and iris appear as the only clinical manifestations. A further point of interest noted was that the eye lesions are not only terminal, but relatively slight, and more prone to repeated relapse than any other class of lesions. Such circumstances suggest that all tissues are not equally protected by the general reaction which occurs during the early stages of a syphilitic infection, and that certain tissues which fail to receive this protection may be capable of self-protection only to a relatively slight degree. In other words, the selective action of the *Spirochæte pallida* is governed by the manner in which the tissues of the host react to the invader. Now this seems to be undoubtedly the case in the experimental animal, and if similar conditions obtain in man, such diseases as general paralysis and tabes may be explained on this basis. It may be supposed, as Hauptmann (34) and also Sézary (35) have suggested, that the peculiar degenerative character of the lesions in the general paralytic's brain and the striking failure of the cerebral tissue to defend itself against the spirochæte are attributable to an immunity weakness of the nervous tissues, and on the other hand, that when the response is adequate, gummata and other formative lesions are developed which save the patient from the graver forms of neuro-syphilis. It must not be supposed, however, that the presence or absence of syphilitic antibodies has been definitely proved, and until this and other hypotheses are placed on the safe basis of experimental study, the pathology of general paralysis is likely to remain an unsolved problem.

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Basal Metabolism in Mental Disorders, especially Dementia Præcox, and the Influence of the Diathermic Current on the Same.⁽¹⁾ By JAMES WALKER, M.D.Edin., B.Ch., D.P.H.
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METABOLISM means the chemical changes of materials under the influence of living cells, and basal metabolism as the rate of energy exchange during rest when only the essential vital processes of the body are at work.

The consideration of the basal metabolism in cases of mental disorder is of interest for two special reasons. It is an established

(¹) A paper read at the Annual Meeting held in London, July 13, 1923.

clinical fact that mental and nervous symptoms occur as a result of disease of the thyroid gland. This method of analysis may therefore assist in a better understanding of cases of mental disorder in whom disturbances of the thyroid function may be an important factor. In this way there would be less need to prescribe extracts of the thyroid gland empirically in certain cases of mental disorder, which has been the practice more or less in the past. Thyroid medication occupies an important place in the treatment of mental disorder, but it should be only employed in those cases where thyroid hypofunction was considered to be either a causative or contributory factor.

The second reason why basal metabolism may be of interest in the domain of psychiatry is because several investigators have found a fairly decided hypofunction of the bodily cells, especially that of oxidation, in certain types of mental syndromes. Without pursuing this point for the present, I may be permitted to say in passing—and I intend to return to this important question—that several of the cases of dementia præcox, in whom I have been able to estimate the basal metabolic rate, have persistently shown symptoms which are reckoned as distinctive of a clinical condition called vagotonia. Such symptoms are a subnormal body temperature, a tendency to bradycardia, and respiratory arrhythmia. These are symptoms which point to some disturbance of the sympathetic nervous system. Further, I am fortunate to have been in the position to examine one or two of these cases during a period of remission, where there has been a corresponding improvement in the basal metabolism associated with a disappearance of the vagotonic symptoms.

This observation indicates that the deficiency in the oxidation processes in the cells is apparently not a permanent condition. In other words, one is inclined to assume that a common factor exists which is responsible for the mental symptoms, the endocrine disturbance, and the disorder of the autonomic nervous system. It is impossible to state the nature of this factor; in fact, it would be dangerous in the light of our present knowledge on the subject, but nevertheless one feels emboldened to say that this factor is removable, otherwise it is a more or less supernatural expectation to explain the occurrence of remissions, which is not an unusual incident in the early stages of the disease prior to the onset of dementia.

THE METHOD EMPLOYED TO ESTIMATE THE BASAL METABOLIC RATE.

The basal metabolic rate can be estimated by two methods. The "direct method of calorimetry" is too complicated for clinical purposes, and is chiefly used for physiological experiments in specially equipped laboratories. The second method is that of "indirect calorimetry," where the rate of exchange is calculated from an analysis of the individual's expired air. In this investigation the "Douglas bag method of indirect calorimetry" was employed, and there is quite good

authority for so doing. Prof. E. P. Cathcart, who is a recognised expert in this line, quotes Yandell Henderson as follows: "This apparatus is much simpler and easier to use, more accurate, and affords more nearly normal conditions as regards the air breathed by the subject than any other device with which we are acquainted. It is equally adaptable to all conditions." Instead of the usually employed mouth-piece, a specially made face-mask was used, seeing that it is very rare to expect the active and intelligent co-operation of the mental patient. Haldane's apparatus was used for the analysis of the samples of expired air. Without taking up more of your time in describing the successive stages in the estimation, may I say that the procedure followed was that described in Macleod's *Physiology and Biochemistry in Modern Medicine*, E. P. Cathcart's article in the *Journal of the R.A.M.C.*, November, 1918, and in Haldane's *Methods of Air Analysis*.

Each patient had no food for at least eighteen hours prior to the test, and was resting in bed during that time and until after the collection of the air expired in ten minutes. During the collection of the expired air, the pulse and respiratory rates are noted. Immediately afterwards the patient's height and weight are measured.

Definition of the basal metabolic rate, and a consideration of the physiological findings.—The basal metabolism is defined as the energy output to keep the body alive; *i.e.*, to maintain its warmth and to maintain the energy for respiratory movements, contractions of the heart, etc.

In order to be certain that the minimal heat production is being estimated, the patient must be in the post-absorptive state—that is, fourteen hours or more after the taking of food.

The profession is indebted to Benedict and Du Bois for the introduction and the application of the science of calorimetry to clinical problems. A few remarks regarding the metabolism of the normal person will not be out of place, and will help us in interpreting the significance of abnormal metabolism in diseased conditions. To begin with, the physiologist is at times impressed with apparently unaccountable variations in the basal metabolism of essentially normal persons, and differences that are not explicable on the basis of size, weight, form, age and sex. We are familiar with a number of physiological constants, but these are, so to speak, only relative constants. For example, it is absurd to say that the normal pulse is a constant, because we know that it varies within limits for the recognition of pathological rates, such as tachycardia and bradycardia. It is only in this sense that the normal pulse may be considered a constant. The same reasoning applies to basal metabolic determinations, except that the normal range of variation is distinctly less.

It is well recognised that one of the main functions of the thyroid is to regulate the intensity of combustion within the body. Sir E. Sharpey Schafer (3), in his address at the Annual Meeting of the Association in 1922, refers to the functions of the thyroid gland, and states that the principal autocoid is the most powerful excitant of metabolic processes known. This author explains that the rise in metabolism

is produced, not by acceleration and augmentation of the chemical processes of any one particular tissue, but by the action of the autocoid on almost every cell in the body. When the thyroid gland is over-active the basal metabolism is increased, and when the activity is less than normal the basal metabolism is decreased. In hyperthyroidism, such as occurs in exophthalmic goitre, the elevation of this rate is from 20 *per cent.* in mild cases to 100 *per cent.* in severe cases above normal. In short, the determination of the basal metabolism is essentially a functional test in thyroid cases. On the other hand, however, one must not rush off and say, because an individual's metabolism is 25 *per cent.* above the predicted normal standard, that he has hyperthyroidism. The high rate may possibly be due to some other disease, such as pernicious anæmia, or due to some pyrexial condition. From this it is obvious that we must correlate abnormal metabolic rates with the clinical findings, and at the same time consider the importance of every form of evidence in any given case.

There are certain inconstant factors, such as variations in the height and weight and the general nutrition of the body, for which corrections are required before one is able to compare results with one another.

Let us take as an example the metabolic rates of obese and thin women (1), and we shall find that, although thin women produce about 50 *per cent.* more heat per kilogramme of body-weight than their obese companions, yet, when the results are calculated on a basis of surface area in square metres, there is little difference. Rubner summarises this observation by saying that the heat value of the metabolism of the resting individual is proportional to the surface area of his body. Du Bois, Atwater and Rosa have each confirmed the findings of Rubner. Du Bois has evolved a formula to express surface area in terms of height and weight, as follows :

$$\text{Surface area} = \text{weight} \times 0.045 \times \text{height} \times 0.725 \times 71.84.$$

Again, it has been shown that females have a lower energy output than men to the extent of 6.8 *per cent.* There is also a physiological variation in the basal metabolic rate according to age. The rate is highest in adolescents and decreases gradually and progressively during the subsequent age-periods. The following is a table for males and females of the normal basal metabolic rates according to age :

Age.				Male.				Female.
18-20	.	.	.	41.0	.	.	.	38.0
20-30	.	.	.	39.5	.	.	.	37.0
30-40	.	.	.	39.5	.	.	.	36.5
40-50	.	.	.	38.5	.	.	.	36.0
50-60	.	.	.	37.5	.	.	.	35.0
60-70	.	.	.	36.5	.	.	.	34.0
70-80	.	.	.	35.5	.	.	.	33.0

A normal range of variation from these normal rates is allowed by Joslin, Benedict, Du Bois and Allen to the extent of *plus* or *minus* 10 *per cent.* Other authorities consider that the greater range of plus or minus 15 *per cent.* is within normal limits. The plus or minus 10 *per cent.* limit of variation will be taken as indicative of the lower and upper physiological limits.

Du Bois has found that by rest in bed for a week he was able to cause a 10 *per cent.* fall in metabolism in severe cases of exophthalmic goitre. This factor of rest has been observed in several mental cases to have had a similar effect upon the basal metabolism. This is a point which therefore requires to be considered in mental cases, who have either been subjected to a prolonged stay in bed, or who by their muscular activity fall more or less into the same category.

Limitations and precautions, especially in mental cases.—There are obviously limitations to metabolism determinations, even in sane people. Wm. S. McCann (2) states: "Besides errors due to apparatus, technique, etc., far more subtle sources of error exist within the patient. The obvious ones are muscular movements, surreptitiously taken food, failure to rest for a sufficient time before the test, all of which may be avoided. Mental excitement or agitation plays an important rôle with many patients in whom it may readily be overlooked." Certain individuals have the greatest difficulty in breathing, and will persistently over-ventilate the lungs, either by increasing the rate of respiration or the depth, or both. This over-ventilation increases the oxygen consumption very slightly because of the increased muscular work. Orr and Kinloch (5), in an investigation into the changes of the respiratory quotient following muscular work, conclude that any sudden alteration in the respiratory quotient suggests that the result is vitiated by a wash-out or retention of carbon dioxide. In sudden changes of the rate of respiration, therefore, there may occur wide fluctuations in the respiratory quotient which are not a true reflection of tissue metabolism.

Such influences as those just mentioned are even more liable to be present when persons with mental disorder are dealt with. In short, it is essential to make preparations so that the patient's co-operation is not to be expected. A very good plan with nervous and mental patients is to subject them to one or more preliminary dummy tests as a matter of routine.

Psychic excitement profoundly affects metabolism. The increased muscular activity in cases of mania and of agitated melancholia leads to a greater consumption of calories. Cannon (4) has, in this respect, demonstrated that emotional excitement produces a temporary increase in the sugar content of the blood, which goes to show that

there has been an acceleration of metabolism. One appreciates, therefore, that there are decided limitations to the usefulness of this method in the field of mental and nervous diseases. The best type of patient to give reliable determinations belongs to the stupor class. Such patients need not of necessity be cases of dementia præcox. Inactive, apathetic and stuporose cases occur in other mental syndromes, and these can readily be dealt with to give fairly reliable results. In addition, it is decidedly advisable to do an estimation on every case where disturbance of the thyroid is suspected from a clinical examination of the patient.

The following criteria were soon observed to be necessary when dealing with mental patients. Silence, absence of excitement and flurry on the part of the examiner, plenty of time, and getting the patient accustomed to the face mask are most important. In the end, the patient passes into that state of complete muscular relaxation with quiet regular breathing, which is so essential for the proper conduction of a test.

A review of the work previously done in the investigation of metabolism in dementia præcox and other forms of mental disease.—Most of the work done in connection with metabolism in dementia præcox and other forms of mental disease was reviewed in the Croonian Lectures delivered in 1914 by Dr. Goodall. Dr. Goodall refers to the researches of Bornstein upon the respiratory exchange in the fasting condition, the muscles being completely at rest. This observer investigated 12 cases of the hebephrenic type of dementia præcox, and in the majority found a marked diminution in the oxygen, the oxygen carbon dioxide exchange amounting to only from 75 *per cent.* to 94 *per cent.* of the normal as measured in calories. Although the latter figure is within normal limits, Bornstein points out that it was only reached because the patients moved, and so vitiated the experiment. The investigations of Gräfe in cases of stupor occurring in different forms of mental disorder, such as the catatonic form of dementia præcox, dementia paralytica, found a definite lowering of metabolism, especially in these dementia præcox cases. The production of heat was diminished to 39 *per cent.* below normal.

A consideration of the basal metabolic rate obtained in the cases investigated.—The data about to be considered have been obtained from over 200 estimations of the basal metabolic rate in 44 cases of mental disorder. Thirty of these are cases of dementia præcox. This investigation has extended over a period of two years, and the majority of the cases have been examined at varying intervals and under different conditions.

Recalling that it has been decided to take the normal range of variation in healthy individuals as + or — 10 *per cent.*, it is found

that 50 *per cent.* of the cases of dementia præcox examined have a basal metabolism less than — 10 *per cent.* The remaining patients have either a normal basal metabolism or one that is slightly in excess of this. The range of variation of the subnormal cases extends from — 12 *per cent.* to — 47 *per cent.*, with — 20 *per cent.* as the average rate of all the cases belonging to this category. Only 3 cases of catatonic stupor have been available, and all of these have a much lower rate than that found in the cases of hebephrenia. No evidence of myxœdema or hypothyroidism is present in any of these cases. Further, in all of these cases there has been no material change either in the mental or physical condition as the result of the administration of thyroid gland extract. With respect to the remaining cases, one is inclined to believe that disturbing influences were present so as to produce a greater basal metabolism. The most evident of these influences is the amount of air expired during the test. This is due both to an increased rate of respiration and an increase in the amplitude of each respiratory phase. Taking the evidence as a whole, especially in conjunction with the reservations mentioned, this investigation is in agreement with the results obtained by Gräfe in his cases of stupor. The lowered basal metabolism in the majority of the cases of dementia præcox is another way of stating that there is a diminution of the oxidation processes within the body. The estimation of the basal metabolic rate cannot go further than this, and therefore an explanation of the causal condition has to be searched for in other directions. The important question as to the rôle played by the thyroid gland requires an answer. Are we justified in assuming that the primary defect to account for the low rate of metabolism is the result of a diminution, permanent or temporary, of this gland's principal autocoid? I do not think that we can find the required explanation in this direction. Otherwise we should have had beneficial results in the administration of thyroid gland, in a manner somewhat analogous to that which is the characteristic effect of its administration in cases of myxœdema. I am becoming more and more convinced that the explanation is to be found in the direction of a diminution of all the bodily functions, including of course that of the thyroid gland, as the result of a lessening of the activities of the nervous system in which the autonomic system shares. At this point it is important to recall that vagotonic symptoms are found in these cases, and, in addition, that there has been a rise towards a normal rate of metabolism, with the disappearance of the vagotonic symptoms in those cases of dementia præcox in which I have been fortunate enough to observe the onset of a remission. A patient, W. G. N—, is a case in point: His basal metabolic rate during the acute stage was — 22 *per cent.* on June 10, 1921, — 39 *per cent.* on

November 3, 1921, — 22 *per cent.* on November 24, 1921, and now during remission is — 12 *per cent.* on April 4, 1923.

With respect to the part played by the nervous system in dementia præcox, as has previously been suggested, I desire to mention the case of a male adolescent, B. F. K—, æt. 18 years. Prior to October, 1922, this patient exhibited the usual volitional disturbances together with the peripheral cyanosis, etc., characteristic of this syndrome. He had to be spoon-fed and was incontinent. On October 5, 1922, his basal metabolic rate was 21 *per cent.* below normal. From November 9 to 15 he received daily a hypodermic injection of one-thirtieth of a grain of strychnine hydrochloride. Following this he brightened up, commenced to feed himself and to talk. At the end of the injections he was observed to be noticeably excitable, but this gradually passed off. On December 14 his mental condition had improved sufficiently as to permit him to work in the kitchen garden. He was discharged some months later, and during the interval showed no indication of relapsing. The striking effect of the strychnine in this case caused me to examine more carefully its pharmacological action. I find that it causes an increase in the metabolic processes and an elevation of the body temperature; small doses stimulate the special senses; the anterior cornu motor cells are stimulated and the intraspinal reflex paths are more ready to receive and transmit impressions. Further observations along this line are required before deductions can be made. Four other cases are at present undergoing a similar course of treatment, and so far improvement to some extent has been observed. Meanwhile, the effect of strychnine in the case reported supports the contention that the cause for the lowered rate of metabolism in cases of dementia præcox is due to a lessened activity of the nervous system and not of the thyroid gland.

Let us now consider those cases of mental disorder, other than dementia præcox, in whom, from the nature of the test, it has been possible to estimate the basal metabolic rate. The patients so examined were chiefly cases of melancholia, who were either of the stuporose, hypochondriacal, agitated or ordinary depressive type. In addition, one case belonging to the exhaustive and another to the psychasthenic class and two cases of imbecility have been investigated. In all of these cases, with the exception of the case of exhaustive psychosis, the basal metabolic rate was found to fall within the physiological limits. The exception was a female, aged 34 years, in whom there was a history of prolonged lactation. The basal metabolic rate was 24 *per cent.* lower than the normal for the same age. There was a progressive rise in the basal metabolism as this patient improved physically and mentally. One of the cases of

agitated melancholia is worthy of mention, because this patient showed clinical evidence of hyperthyroidism, in that there was exophthalmos with a slight fulness in front of the neck. The basal metabolic rate was found to be 18 *per cent.* above the normal level.

This rate is in agreement with the clinical findings, and shows that this patient is suffering from hyperthyroidism, although of a mild character.

The influence of the diathermic current on the basal metabolic rate.—Luke (6), in his *Manual of Physio-therapeutics*, defines diathermy as a form of thermo-therapy which utilises electrical energy for the production of thermal effects in the body tissues. Diathermy is but a variant of "high-frequency." The underlying physical principle is what is known as the Joule effect, on which depends the lighting of lamps. Electricity, when passed through a resisting medium such as a slender nickel wire, becomes converted into heat; but if we substitute the body tissues, which act in a manner similar to the resisting wire, the result is the same—heat is generated.

The heat generated is endogenous, that is to say, it is produced actually in the deeper-lying tissues. The sensation of heat persists for a considerable time after the treatment ceases.

With regard to the physiological facts observed from general applications of "high-frequency," it is stated in *Medical Electricity* by Lewis Jones that D'Arsonval observed an increase in the output of CO₂, noted as having been raised from 17 to 37 litres; an increase of heat production, from 79 to 127 calories per hour; and an increase of nitrogen and phosphoric acid in the urine. "An Experimental Investigation into the Action of Certain Electrical Treatments on the Blood, Blood-pressure and Metabolism" is the title of a paper by Bain, Edgcombe, Shirley Kidd and Miller, published in the *Lancet*, April 30, 1921. Their findings with diathermy were as follows: (1) a slight fall in the systolic blood-pressure, (2) an increase in the leucocytes, (3) in the urine an increase in urea and ammonia nitrogen.

Up to the present it has been possible to estimate the basal metabolic rate, before and after the application of diathermy, in 20 cases of mental disorder. Most of these have been cases of dementia præcox, but a few cases of melancholia and of confused states have been dealt with.

The adopted procedure was that each patient's basal metabolism was estimated in the fasting and resting states for three days, and during the following three days this was again estimated under the same conditions except that in addition diathermy was given for fifteen minutes. The degree of reaction varied, but in every case there was a decided increase in the basal metabolism, the average being from 10 to 15 *per cent.* increase.

A constant relationship appears to exist between the basal metabolic rate, the pulse-rate, and the body temperature. The latter was taken in the mouth, and this and the pulse-rate were estimated immediately before and after the application of the diathermy. The body temperature is increased from 2 to 3 degrees Fahrenheit, and the pulse-rate from 20 to 30 beats per minute.

Let us take a case as an example: A. M. R—, a female, æt. 35 years, and suffering from obsessional insanity.

	<i>Before.</i>	<i>After.</i>
Pulse-rate	68	80
Body temperature	96·8° F.	98·6° F.
Basal metabolic rate	33·6	37·8
Percentage increase of basal metabolic rate = 11 <i>per cent.</i>		

The rapidity with which the cases reacted to the diathermy varied, as determined by the effect on the body temperature and pulse rate. For example, in those individuals where there is little change at the expiration of the fifteen minutes, a satisfactory response could be obtained by prolonging the application for another fifteen minutes. The basal metabolism was similarly influenced. This form of response was particularly noticeable where the body temperature is decidedly subnormal, and therefore is found in the more severe degrees of stupor. For example, let us consider a case: F. M—, male, æt. 36; catatonic stupor. Before diathermy the pulse-rate was 62, the body temperature 97·4° F., and the basal metabolic rate 33 *per cent.* below normal. At the expiration of fifteen minutes the pulse-rate remained at 62, and the body temperature had risen only 0·2° to 97·6° F. The application of the diathermy was continued for a further period of fifteen minutes, when the pulse was now 66, the body temperature 98·2° F., and the basal metabolic rate became only 23 *per cent.* below normal.

The elevation of the basal metabolic rate is only of a temporary character, which from a therapeutic point of view is rather unfortunate. During the following twelve hours there is a gradual return of the basal metabolism to the neighbourhood of that prior to the treatment.

For example, in the case of a female patient, D. R—, suffering from the hebephrenic type of dementia præcox, the resting basal metabolic rate was 21 *per cent.* below normal. After the first application of diathermy there was a rise in this rate to 7 *per cent.* below normal, while immediately after the twelfth application it was more or less the same, namely 6 *per cent.* below normal. Let us also in this case follow the course of the body temperature in connection with the seventh application of diathermy. In the resting condition, and before the application of diathermy, the body temperature was 97° F. After fifteen minutes of diathermic treatment it had increased to

99.5° F., and it remained so for another fifteen minutes. At the end of half-an-hour after the test it had fallen to 98.8° F., and in the course of the following hour it had dropped still further to 97.6° F.

The usefulness of the diathermic current in the treatment of mental cases.—From the experience gained in this form of treatment there is no doubt that diathermy is a useful therapeutic measure. It is particularly useful in those cases where there is a lowered rate of metabolism, as revealed by indirect calorimetry and by a subnormal body temperature, because it stimulates metabolism even if its effects last only for a short time. The increased elimination of waste products from the body does have a beneficial effect upon the general physical condition. In consequence of this, one anticipates a corresponding improvement in the mental state. Diathermy, of course, is not expected to produce results by itself, but, when taken in conjunction with other measures, it is certainly a useful mode of treatment. When the beneficial effects of diathermy are looked at in this sense, it has been observed to play a not unimportant part in furthering recovery. This effect has been noticed in not a few cases of recent mental disorder.

CONCLUSIONS.

1. The determination of the basal metabolic rate assists in a better understanding of cases of mental disorder in whom disturbance of the thyroid function may be an important factor. In this it is important to correlate abnormal metabolic rates with the clinical findings.

2. Of the cases of dementia præcox examined, 50 *per cent.* showed a subnormal basal metabolism, the average rate being 20 *per cent.* less than the normal. These findings are in agreement with those of Gräfe in his cases of stupor.

3. No material change followed the administration of thyroid gland extracts. It is suggested that the diminution of the oxidation processes in the body tissues is due to a hypofunction of the nervous system, particularly the autonomic, and not to thyroid disorder primarily.

4. During remission in the course of dementia præcox the basal metabolism approaches that of the normal individual.

5. In the cases of mental disorder examined, other than those belonging to the dementia præcox class, there was no deviation of the basal metabolism from the normal, except in the one case in which there was clinical evidence of hyperthyroidism.

6. The heat produced by the general application of the diathermic current is endogenous, and has increased the basal metabolism on an average of about 10 to 15 *per cent.* in all of the cases so treated. The

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intensity of the reaction produced varied with the duration of the treatment.

7. Diathermy in conjunction with other measures is a useful mode of treatment in cases of mental disorder where there is a subnormal basal metabolism.

(¹) Lusk, *Science of Nutrition*, 3rd ed.—(²) *The Medical Clinics of North America*, March, 1921.—(³) *Journ. of Ment. Sci.*, lxviii, 1922.—(⁴) Cannon, *Bodily Changes in Fear, etc.*—(⁵) Orr and Kinloch, "The Estimation of the Physiological Cost of Muscular Work," *Brit. Med. Journ.*, p. 39, 1921.—(⁶) Luke, *Manual of Physiotherapeutics*.

The Psychogenic Factor in the Causation of Mental Disorder.(¹)

By THOMAS BEATON, O.B.E., M.D., M.R.C.P., Senior Assistant Physician, Bethlem Royal Hospital, London, S.E. 1.

It is a truism that successful treatment in any branch of medical practice, or, indeed, in a wider sense, in any activity in which we may be engaged, depends on an adequate and exact knowledge of the relation of cause and effect, and the conscientious clinician who bears that fact in mind finds the present position of clinical psychiatry one of great difficulty. As a highly esteemed physician remarked a little while ago—during one of those outbursts of professional candour which seem to be necessary at times in the interest of our self-respect, so far as our capacity to really modify the condition of our patients is concerned, we are in the position of interested observers, for we may arrange conditions, we may guard against added stresses, but do what we will, and however hard our endeavour, our patients alter, some to improve, others to deteriorate, with an aggravating indifference to our efforts. It behoves us, then, to be extremely critical of our assumptions in any particular case, to be as precise and as adequate as possible in our description of the whole train of events, and to review very carefully any deductions we may make as to the relation of possible cause and effect.

Not the least of the difficulties surrounding the practice of clinical psychiatry at the present time is that this is an age of specialism; broad views are the exception rather than the rule, and results are apt to be interpreted solely and dogmatically within the horizon of the speciality involved. In general medicine and surgery pathological verification has, of late years, kept pace with the extension of the different vistas of approach to the problems to be solved, and so has corrected the distortions which otherwise might have arisen, but in our branch of medicine pathology is, as it were, only just making

(¹) A paper read at the Annual General Meeting held in London on July 11, 1923.

its voice heard. It is no uncertain voice when it does speak, and the definite contributions to knowledge such as that afforded by the work of Sir Frederick Mott, who has given us a concrete basis for the biological failure which a large group of our cases really represent, cannot be valued too highly in a sphere which has been for so long a playground for pure speculation.

When we come, however, to actual practice we are confronted by divergencies of views which, to the physician who is conscientiously trying to understand his work and to get his patients well rather than to substantiate wide generalizations, are baffling in their inconsistency. These views, based on the rationalizations of the various specialities which have attempted to deal with the matter, fall into two main groups according to whether the causal factors accepted are psychogenic or physiogenic. There are deviations within each group, but the great schism and that one which to be bridged calls for the most clear thinking and the doing away with the greater misconceptions lies between the two main groups indicated. Although a certain element of antagonism has no doubt been engendered by the extraordinary dogmatism and self-sufficiency of the analytic school, which has been so active during the past few years, this gulf is largely due to the widely separated regions from which the two lines of approach have converged on to the study of mental disorder, the physiogenic deriving from natural philosophy applied to the elucidation of organic disease, the psychogenic with its roots in the unfathomable depths of metaphysical speculation. In addition, to my mind, the issue has been unnecessarily complicated by the persistence of the old argument of body against mind.

Now, the psychogenic factor, as the term implies, is one which arises within the Psyche, and by this we mean that it is one which falls within the province of psychological investigation, and which can be differentiated and described by using the terminology which belongs to that science, but because these factors have this psychological significance, it does not follow necessarily that they are to be classed apart and regarded as differing entirely in nature from all others. Because we are accustomed to view a set of phenomena from one point of the compass, we may find it very difficult to recognize them when we are introduced to them from an entirely different direction, but if we are to have any real conception of them we have to keep both aspects in mind. It is in perpetuating this difficulty of recognition of the essential unity of the processes of mind and brain that the baneful effects of the old conception of an opposition of body and mind are apparent; to speak of the one influencing or reacting on the other is as absurd as to think of the heat of a mass influencing the amplitude of vibration of its component molecules.

In the physical example quoted, the temperature and the amplitude of vibration of the molecules are simply two ways of regarding the same thing, which is the energy content of the mass. Subject the object to a stimulus of radiant energy and the temperature rises as the amplitude of the molecular vibration increases; both phenomena are co-temporal, and both are equally necessary to that particular change of relationship between an object and its environment which we describe as the absorption of radiant energy in the form of heat. The various theories of the past which have sought to give the relationship of mind and brain have necessarily regarded the connection of the two as very close, but they have failed to indicate that in speaking of the mind or of a certain sphere of neural activity we are really using two modes of expressing the same function of the organism—that of adaptation to the environment.

Bergson says that the essence of the mind is change, and it is the change of the already organized neural disposition that constitutes adaptation as we see it progressing in any of the more complex organisms with a central nervous system. The modification of the activities in the higher nervous centres and the awareness in terms of the mind are simultaneous in time, and there can be no question of cause and effect where two phenomena are identical in time. It might be thought that this is purely a return to the old parallelism, that the awareness and all that it connotes is merely the epiphenomenon, and this would be so if life could be explained on purely mechanistic principles, but it is clear that such an explanation cannot stand. As McDougall points out, the dominating partner in the trinity of Cognition, Affection and Conation is not cognition as the associationists would have it, nor affection as some of the modern analytic doctrines would seem to accept, but conation. It is the conative element in any single item of experience which has the connotation of purpose, it is the thread of purpose throughout the life-history of the organism which binds the successive phases of experience together, and it is this purposive characteristic of animal life which seems to be so intimately associated with the degree of awareness, particularly where the accomplishment of the purpose demands some modification in the pre-existing dispositions. Cognition and affection are not the aim of existence; the store of accumulated experience we term the sum of our dispositions has been laid down in so far as it has served the purpose of the organism from time to time; the process of association which is the activity by which we pick our way through the store of memory is perfectly mechanistic until some change of disposition is necessitated. Consider the vast associational activity underlying the simple psychological act of perception, and contrast it with the slow and ponderous association

which occurs when some purpose is in view which demands any considerable remodelling of our previous views. Again, instinctive activity, which is extremely purposive, but which is definitely laid down as a set response to certain groups of stimuli, if sufficiently intense and uninhibited, may proceed with very limited awareness: indeed, in those cases where the responses have been purely instinctive, such as in certain types of behaviour which occurred during the recent war, the subject was not aware at all and could not recall the experience in memory. Consciousness, then, can never be regarded as an epiphenomenon from this point of view of mental and nervous function, but must be considered an integral phenomenon of adaptation where modification of the organism is effected through the agency of a nervous system.

I am afraid that I have digressed a little, and, I fear, rather un-availingly, because it is impossible to sum up a difficulty such as that of the relationship of body and mind in so short a space, but I wished to clear the way for the view-point that in studying the mind we are studying certain aspects of nervous function, and that, above all, we are studying the life of a living unity—the organism. So soon as we realize that the psychological description of mental phenomena must have a correlation in nervous function, we are saved from many dangers which lie around any attempt to solve the problem of life by purely psychological means. Similarly we can avoid the limitations which surround us if we attempt the problem on the lines of materialistic determination. Generalising at this stage of our knowledge is to be deprecated, but perhaps one may say that, regarding the organism as a unity, nervous anatomy and physiology give us the potentialities for life in relation to the environment, psychological investigation gives us the capacities. Without that mental activity we call experience, the potentialities could never become capacities, and equally, without the potentiality no amount of experience could develop the capacity.

Thus, in the proprioceptive mechanism of the nervous system lie the potentialities of being able to ride a bicycle; but no one can ride a bicycle without experience, during which the necessary adjustments are effected. Notice that in this example adjustment does not necessarily mean in structure, but in the function of a structure that is already there. Once those adjustments have been established, however, the subject can always repeat the performance: there is now the capacity for riding a bicycle, and this capacity is retained until some damage occurs to the mechanisms concerned in the activity. This capacity, let us notice, is not a definite entity except when regarded in the broadest sense as a conception of "riding a bicycle," for when the capacity is in course of reproduction, it shows

an infinite variation; whether the road be level or up and down, whether it be straight or curved, the movements are co-ordinated to the environmental vagaries within the limits of the capacity of the organism performing. Such an example of retentiveness in a purely neural structure effectively disposes of the argument put forward by Bergson that the basis of memory cannot be organic, on the grounds that the engram laid down during the previous experience would have to be specifically and accurately fitted by new experience for the memory to be evoked. If we permit our conception of the psyche to extend to cover not only conscious processes but those which are unconscious as well—and this is an attitude which is necessary if psychology is to be applied to the living organism—then we shall correctly describe this modification of the proprioceptive function as an acquired cognitive disposition, and we may conceptualize it, as is again necessary for psychological purposes, as the “how to ride a bicycle” disposition. Now, because the details of the facilitations and inhibitions that constitute the total modification of function involved lie within the proprioceptive mechanisms, the accompanying awareness is very limited. We have no awareness of our kinæsthetic modifications as such, and this is probably because it is the kinæsthetic impressions which, underlying the differentiation of the environment permitted by our sense-organs, subserve the act which we term perception. The actual awareness of our subject in this example would be limited to a few consciously adjusted movements early in the “learning,” and afterwards the general awareness that he can ride a bicycle. The whole vast “memory” is entirely subconscious, and no details can be recalled as memory images save possibly for the few consciously directed movements indicated, and, because of this limited awareness, we regard the whole adjustment as essentially of the nervous system.

So soon, however, as we approach the matter of sensory adjustments, the degree of awareness associated with any modification of function through experience increases enormously, and we are inclined to regard such activities as belonging to the mind entirely. Yet when we examine one of these so-called mental processes we find that, even here, awareness of the whole activity involved is largely a matter of degree. Consider the act of perception. We are aware of an object through the medium of our sense-organs, and that is all we are aware of; it is all of the activity that matters for the general purpose of the organism; of the detail of association, of the facilitation of this cognitive disposition or the inhibition of that, of the orientation of attention, of the synthesis of sense impression, we have no actual appreciation. Can we regard this complex activity as differing, save in the actual nervous structures involved, from those

co-ordinating adjustments covered by the awareness of "how to ride a bicycle"?

Without examining any more of the conceptions used in psychology from this point of view, I hope that I have indicated roughly the grounds for a belief in the essential unity of the processes of life which we look at from the two aspects of mind and brain, and for regarding the psychogenic factor, which can only be successfully differentiated and described in psychological conceptions, as not differing in nature absolutely from the physiogenic, but rather in the complexity and generality of the nervous activity involved. With this reservation in mind, then, we may proceed to examine these psychological antecedents of the later mental state, and we find that they fall into two main groups—those which are innate and those which are acquired. Here at once a great difficulty arises: there is no absolute criterion by which we may differentiate between the two; the study of psychology as a biological science being only in its infancy, even psychological description is inadequate. Much discussion, for instance, rests around the matter of "instinct," as to how much of conduct is to be regarded as instinctive, as to how many different forms of instinctive reaction there are, and so on. Concerning such questions, we tend to take those general characteristics as form part of many various reactions of the subject, and as are seen to occur in the reactions of many other subjects, as innate, and to sum them up in the conceptions of character and temperament, while the facility and definiteness of each individual reaction to the sequence of environmental circumstances we look upon as the acquired modification.

The mental state, the content of the mind and the conduct exhibited by the organism may be taken as the expression of the total reaction of the organism to the particular environmental circumstances of the moment; leaving on one side those interferences with the integrating mechanisms of the nervous system which we can definitely ascribe to gross physiological agencies, this total reaction is determined primarily by the innate dispositions, and secondarily and in detail by the acquired modifications which have occurred in the course of experience. If we have not been closely in touch with our patient throughout his life, we are dependent upon his memory, and on so much of his revived experience as he chooses to lay before us for our data on which to work, and, in this connection, my experience has been that it is inhibition much more than amnesia due to repression which is the difficulty in ascertaining these past experiences which have a bearing on the patient's troubles. However, even if we assume a complete lack of inhibition, that the patient is willing to open up the whole of his past for our inspection, even then we are not on sure ground, for we know that the revival of experience

is liable to be disturbed by affective dispositions wherever an experience has involved the synthesis of a cognitive with a strong affective disposition. Again, no experience after any lapse of time can be reproduced accurately; the subsequent flow of modification must influence any reproduction to a certain extent. These possibilities are likely to be overlooked if we allow our conceptualization in psychological terms to run away with us. A memory is not an entity; each image is the awareness part of an activity, and is a resultant of the complete or partial orientation of the total nervous processes involved in the function of reproduction which we conceptualize by the same term "memory" as we apply to each separate performance of the function. Not uncommonly the apparently revived image is not a reproduction at all; a case of dementia paranoides, recently under observation, produced memories of her actual birth and of her intra-uterine life with great conviction and clarity, but she also produced equally clear memories of her adventures with the Kaiser and with Charlie Chaplin, to whom she thought she was married. These were, of course, purely phantasy developments, but they were antedated in time, and so could not have been regarded causally, however they might be considered. There are many difficulties in the way of the attempt to arrive at a satisfactory chain of cause and effect by the exploration of the modifications of reaction due to experience, and I, personally, am very chary of accepting as correct and absolute such recollections as the patient may bring forward. Even the method of free association which at first sight appears to have solved the problem is to be doubted, in so far as it is questionable if any mental state can be rendered purposeless at will. Nevertheless, let us assume that we have a really accurate and complete reproduction of the past experience of the patient; then, by the application of the principle of determinism, we are forced back further and further in the temporal sequence until we arrive at a point when, owing to the lack of cognitive dispositions, formulated experience could not occur. Here is a region of life inaccessible to analytic psychology, and yet it is in this period of life that the prime causes as regards the psychogenic factors are placed by the analytic theory. The grand simplification effected by that hypothesis in reducing the innate factors to one, the sexual, the postulating of the prime and major modifications by experience in the inaccessible region of life, and then the reduction of all subsequent experience by means of an ingenious use of symbolization, is one of the most delightful rationalizations that the scientific mind can conceive.

Let me say here, lest I be misunderstood, the data as revealed by analytic methods are by far the most valued contribution to our understanding of a patient's attitude that modern psychology has

received. As a means of placing ourselves in touch with the patient, of appreciating his view of life and of so gaining in our powers to influence him, no psychiatrist can afford to remain in ignorance of them, but when a general and all-embracing hypothesis is derived, self-sufficient and universally applicable, then one must say "not proven." The assumptions to be made and the disregarding of the actual physiological state of function of those activities which, as we have seen, can never be brought into awareness, are conditions of belief in the Freudian doctrines that no clinician could accept. An experience of some years of psychiatry leads me, personally to the conclusion that of the two aspects of mental disorder, the mental content and the form of the disorder, such information as we can obtain by psychological analysis enables us to understand and, in a way, explain the former, but no absolute chart of the experience of the patient can throw any real light on the latter. There is the innate factor to be reckoned with, and this is too closely bound up with the dispositions inherent in the nervous system and their normal and morbid physiology to be ever adequately dealt with in terms of psychology alone. Thus general paralysis is a disorder of known pathology, and one which, in its course, keeps within fairly definite limits, yet the actual mental content varies enormously, and is just as open to analysis, so far as interest is concerned, as that of any psychosis.

As an interesting example of the essential difference between the form of the psychosis and the mental content, I should like to refer to two cases of acute maniacal excitement which came under observation very shortly after one another. The patients were both men of about forty years of age, and the psychosis was the first attack in each instance. Both were of considerable intellectual ability and had attained considerable distinction in their different walks in life, one being keenly interested in theology, the other in psycho-analysis. The life-experience of the two differed widely save that they had both adopted professions where their natural egotism, which was strongly in evidence, could be sublimated in the care for, and the interference with, the affairs of others. Except for minor variations in the intensity and extent of the accompanying hallucinosis, the two psychoses ran almost identical courses, and both patients eventually recovered the conventional inhibitions which permitted of their return to their careers; neither had any real insight into the nature and extent of his mental disturbance, and each was inclined to be intolerant of the steps which had been rendered necessary and which had been taken in order to secure adequate and proper care and treatment during the illness. Without going into any further details, the clinical course of acute maniacal excitement with recovery being

well known to the members of this Association, I will come to the point of interest which I wish to bring to your notice, and which arose during the convalescence. I put it to each patient, if he did not consider that he had been suffering from a psychosis, what, then, was the meaning of his extraordinary conduct? The theologian replied that he had been having the most wonderful and inspiring experience, for which he felt nothing but gratitude, and from which he had derived much benefit; our view as regards his conduct was quite wrong and unjustified, the whole explanation for it being that he had actually been in the presence of God. The other patient replied in practically the same terms; he was very pleased with himself, his experience had been both interesting and instructive, he intended to go thoroughly into all the details with us because he was sure that we were on the wrong track, and his newly acquired knowledge would throw a great light on obscure and disputable matters. He insisted that there had never been anything radically wrong with him, save perhaps that he had felt rather run down beforehand, and the solution of the whole matter was that he had actually been living in the subconscious mind.

Here the form of the disorder was the same; it might be described, perhaps, as a wish fulfilment; but the mental content, which gave the meaning to the behaviour, was entirely different in each case, and was determined by the experience of life under which the dominating sentiments had been built up. From the investigation of many and varied cases of mental disorder from the psychological point of view, the conclusion to which one is driven, as I have suggested earlier, is that psychological analysis will never do more than give us an insight into the mental content, such matters as the form of the disorder, the mental state, temperament and character, for all these are of the same order of phenomena, are dependent on determinants which are inaccessible to psychological approach. Such a conclusion is not fundamentally at variance with the general tenour of the views held by the Jung school of analytic psychology, and as expressed in that writer's recent work on psychological types.

As an example of the extreme difficulty of assigning the correct value to the purely psychogenic factor, the following case may be of interest:

A patient, æt. 38 years, of the male sex, was admitted to hospital suffering from acute confusion with excitement, the history being that three days previously he had suffered from an extreme emotional shock. There was insanity in the family, the mother having suffered from involutional depression, while the father was a man of narrow sectarian religious views, and was reputed to have had a violent and uncontrollable temper. The patient had been brought up in this rigid home environment and had adopted the profession of a solicitor. Although he had had no manifest mental disturbance during adolescence, it was clear that he was of an unstable temperamental type, for at the age of 23 he had experienced

a sudden religious conversion, depending—or so he rationalized it—upon his suddenly becoming aware of the real significance of a certain passage in the Bible. At this he threw up his profession and engaged himself in work of a quasi-religious social type, which afforded, it may be deduced, a satisfactory sublimation to his temperament. His ability was above the average, and he became a much relied upon officer in one of the large organizations whose activities lie in the direction indicated. He married, and for the last ten years had carried on the administration and had guided the work of his association in India. He was regarded as a zealous and capable leader with a special aptitude for the purposes of his employment. Eventually he overworked himself, he contracted malaria and dysentery, and with the combination of these maladies he returned to England early in 1922. Here he was placed under treatment, and, after six months, was considered cured, and fit to take up work again. In the autumn he made a tour through Ireland, his native country, lecturing and carrying out propaganda, which was somewhat of a stress under the circumstances of the disturbed state of the country, but apparently his work was very successful, and his health gave rise to no anxiety except that he had a mild attack of what was thought to be influenza while in Belfast in October. In December, as his tour was nearly finished, he had news that his mother, who was residing in this country, and to whom he was greatly attached, was unwell, and shortly, he was advised to return to her at once as she had become worse. He thereupon hurried home, and was met at Paddington with the news that he was too late. He was very distressed and emotional, and his wife took him to a hotel in London straightway. This was on a Wednesday afternoon, and, by the evening, instead of his regaining control of himself, he was definitely worse. His behaviour became curious, he was restless, agitated, and could not attend to anything for any length of time; he took a ring off his finger and threw it into the fire, he failed to recognize his friends at times, and seemed to be seeing things that others could not. Thinking that the condition might be something to do with his previous tropical disorders, his wife called in an eminent physician, in whose hands he had been treated previously. A careful examination, however, failed to reveal any present infection, and treatment was directed towards allaying the restlessness. By the Friday it became impossible to nurse the patient in his room at the hotel, and a very eminent neurologist was asked to give his opinion. Again, a careful examination was negative in its findings, and it was resolved to place the patient under certificate and remove him to hospital, the diagnosis being one of acute confusional insanity. On admission, the patient was a well-kept man in good physical condition, with no evidence of physical disorder. He was vividly hallucinated, restless and confused. No intelligible responses could be elicited from him, but he would shout incoherent expressions, and he would repeat the phrase "Black white" time after time with incredible rapidity for considerable periods of time. He also showed interesting emotional phases in which he became intensely excited, threw himself about, and persisted until pure exhaustion seemed to supervene and he lay fairly quietly for a while. Such an attack was almost certain to follow if any sustained effort were made to gain access to his consciousness. His habits were neglectful, and it was necessary to spoon-feed him. This state continued for about five days, when the excitement began to subside. The deterioration in his physical condition was very striking, there was much wasting, and a slight rise of temperature was noted. To set doubts at rest a blood-count was performed, but apart from a little vacuolation of the red corpuscles there was no evidence of either septic or malarial infection. A lumbar puncture produced a fluid which was negative to all tests save that there was a very slight trace of globulin, it contained no red cells, and only about five white to the cubic millimetre. The patient's condition was so precarious that, on the existence of the vacuolations of the red cells, it was thought possible that the attack might have been due to a cerebral malaria, and small doses of quinine were administered intravenously. This, however, produced no modification of the condition. There was extreme difficulty now in feeding him even by means of the œsophageal tube, there was a general loss of tone throughout the entire musculature, the heart was failing, and the patient was living on such stimulant as he could be induced to take. Once on the Saturday evening he made one sensible answer to the effect that he felt rotten, but his attention lapsed almost at once, and on the Sunday morning he died. Here was a case where the whole attack could be very plausibly accounted for on psychogenic grounds. The acknowledged mental

instability both in the heredity and in the life of the patient, the existence of a strong mother-complex, the sudden emotional shock, all seemed to fit the situation adequately, and, when the *post-mortem* examination was commenced, there was little hope that any adequate physical cause of death would be revealed.

On opening the calvarium, however, there was found an extensive œdema and engorgement affecting the pia and the actual cortex over the whole vertex of both hemispheres. On the left side there had been rupture of several small cortical vessels, the escaping blood having extravasated between the convolutions and under the pia. Microscopic section later revealed an intense encephalitis affecting the cortex and the basal ganglia. In a case such as this the sequence of events is not at all clear. Did the vaso-motor changes accompanying the emotional disturbance determine the onset of the encephalitis, or was the encephalitis already commencing, and the cause of the prolongation of the emotional reaction? How far was the previous mental instability responsible, and how much value should be attached to the previous tropical infection? How many cases, one might ask, of acute confusional insanity, with complete or partial recovery, are really mild encephalitis?

In conclusion, I should like to say that in attempting to discuss the matter of the psychogenic factor, I have been guided more by the sense of actual difficulty arising in clinical practice than by any feeling of ability to contribute to the state of knowledge on the points I have raised, and if I can stimulate some exchange of opinions on these very debatable problems I shall feel that I have satisfied my aim, and can carry away some fresh light from the experiences of others. I would also express my thanks to Dr. Porter Phillips for his permission to refer to the cases I have cited which were under care in Bethlem Royal Hospital.

The Ranchi European Mental Hospital.⁽¹⁾ By OWEN BERKELEY-HILL, M.A., M.D.Oxon., Major I.M.S.

THERE is a Persian saying that there is no greater anguish known among mankind than to have many thoughts at heart and no power of deed. This particular form of anguish must be well known to most medical superintendents of mental hospitals, for how many of them long to be able to raise the standard of work at the hospital whose welfare they have at heart but, for some reason or another, the power of deed is denied them? Nevertheless, in spite of many a heart made sick by deferred hope, every medical superintendent is probably in a position to raise the efficiency of the hospital in his charge provided he can get plenty of good ideas to work with.

It was my privilege last year to attend as a guest the Annual Meeting of the Medico-Psychological Association at Edinburgh. As I listened to the papers that were read and discussed I was struck with the feeling that each of us knows very little of the details of the routine

⁽¹⁾ Abstract from a paper read for the Author by the President at the Annual Meeting held in London July 13, 1923.

work of other hospitals besides the one to which he belongs, especially if he be, like myself, an exile in a far country. Besides the craving for knowledge, there comes at times to those who work in places remote from home and friends an intense longing for sympathy and encouragement from their colleagues in the old country who, like themselves, are fighting the battle for efficiency, but without the disadvantages attendant upon life lived in a tropical country among an alien people. I hope therefore that this short account of the Ranchi European Mental Hospital may elicit sympathetic criticism from fellow-workers in the United Kingdom.

The Ranchi European Mental Hospital is the only mental hospital in India which is intended solely for the treatment of persons of either European or American parentage. Natives of Asia or Africa are not eligible for admission. The term "European" includes persons of mixed parentage, *i. e.*, Anglo-Indian or Anglo-African, and to the former the largest percentage of patients belongs. Ranchi is situated in the province of Bihar and Orissa, 275 miles N.W. of Calcutta. The tropic of Cancer practically passes through it.

The Hospital is built on the "pavilion" system and covers a total area of 85.26 acres. It consists of five wards for male and five for female patients. These ten wards include two hospital or infirmary wards, one for the male and one for the female section. Besides these buildings there are two recreation rooms, several workshops, a laundry, a kitchen, and a barber's shop.

The Hospital is built to accommodate 92 male and 88 female patients. At the moment of writing there are 79 males and 69 females under treatment. Besides certified scales, voluntary boarders are admitted. All patients are classified as "paying" or "non-paying." There are three classes of "paying" patients—first, second and third. Voluntary boarders may be paying or non-paying. Patients are admitted only from six of the provinces of India, *viz.*, Bengal, Punjab, Bihar and Orissa, United Provinces, Assam, Central Provinces. The Hospital has been placed during the past year under a Board of Trustees composed of representatives of the six provinces mentioned above. The chief concern of the Board of Trustees is with the financing of the Hospital by subscriptions from each of the six provinces. The amount paid to the Hospital by each province is based on the number of patients sent to the Hospital from that province. Besides this source of revenue the Central Government of India contributes towards its maintenance.

The medical staff consists of five medical officers and a compounder. The Medical Superintendent is an officer of the Indian Medical Service. The remaining four medical officers include two assistant surgeons and two sub-assistant surgeons, three of whom are Indians and one

an Anglo-Indian. There is also attached to the Hospital a part-time dental surgeon.

The nursing staff at present consists of seven European male attendants and five European nurses, including a matron. In addition to the European nursing staff there are 35 male and 35 female Indian attendants. A course of lectures was given to the Indian male and female attendants; 12 male and 8 female attendants qualified for the certificates granted by the Red Cross Society. One of the European male attendants is also the bandmaster of a band of 22 performers drawn from the Indian male attendants.

The Hospital was opened in 1918. In view of the fact that those responsible for the original design of the Hospital were so obsessed with its custodial function as to sacrifice thereto most, if not all, of its remedial potentialities, the institution has anything but an agreeable appearance. It is entirely devoid of anything that might be called a "laboratory," although a psychological laboratory is now under construction. In the absence of a properly equipped laboratory only the most simple routine laboratory work can be carried out, and any investigation that calls for more than the most elementary equipment has to be done for us in Calcutta. Nevertheless, we manage to perform routine examinations of blood, urine, fæces and sputum of new admissions, besides recording the hæmoglobin index and condition of the urine of every patient once a month. Since 1920 the blood of every patient has been subjected to a Wassermann test.

Cases of indubitable syphilitic infection are treated along lines suggested to me by the late Col. W. D. Sutherland, *I.M.S.*

After a definitely positive Wassermann reaction has become negative and remained negative for a year at least, the treatment should be suspended and the blood taken every six months, a provocative injection being given just before the second time of taking it. The contra-indications for organic arsenic are: heart disease, arteriosclerosis, aneurysm, kidney disease, chronic intestinal disorder, advanced pregnancy.

As there is no laboratory here wherein blood or cerebro-spinal fluid can be examined, all Wassermann reaction tests have been carried out for us by the Imperial Serologist at Calcutta. Altogether 106 patients have been treated for syphilitic infection since 1920, involving the administration of 684 intravenous injections of one or other of the usual arseno-benzol preparations. In only one case did symptoms of an alarming nature follow an intravenous injection. This case was that of a female patient who developed signs of collapse two hours after the injection, but recovered completely with rest and restoratives. It is now the practice to keep every

patient in bed for the day on which he (or she) has an intravenous injection.

Since September, 1920, a *post-mortem* examination has been performed on every case of death that has occurred in the Hospital save three. Altogether 24 *post-mortem* examinations have been carried out up to date.

On the whole the general health of the patients at the Ranchi European Mental Hospital is very good. So far there has been no epidemic of any infectious disease except a mild outbreak of influenza in 1918 and 1919. Malaria is our worst enemy, but the malarial infection that occurs is nearly all benign tertian. All cases of malaria are treated according to a system recommended by my friend Major R. Knowles, *I.M.S.*, Assistant Director of the Tropical School of Medicine, Calcutta. The entire course of treatment lasts two months. Since 1920 four cases of tubercular infection have been diagnosed among the patients. There has been a notable absence of diseases affecting the alimentary canal. Dysentery, which is so often such a trouble in hospitals for mental cases, is practically unknown here.

The eyes of every patient are examined both as regards errors of vision as well as ophthalmoscopically. Spectacles are provided for suitable cases, and oral and dental trouble is attended to by the dental surgeon.

MENTAL TREATMENT.

For the mental disturbances of our patients treatment is divided under the following headings :

Rest.—Every patient on admission is kept in bed for at least a week and sometimes longer. Sleep charts are kept for all restless patients or for those whose ability to sleep is defective.

Prolonged bathing.—Patients who suffer from acute excitement so that they will not lie in bed are treated by prolonged immersion in water at an agreeable temperature in baths of special design. It is sometimes necessary to use a lid with an aperture for the patient's head over the bath. It is generally sufficient to place a blanket or sheet over the bath. The patient undergoing hydrotherapy of this kind is placed in his bath the first thing in the morning, and there he remains the whole day in charge of two attendants. The attendants are responsible for the water of the bath being kept at the prescribed temperature and for the maintenance of complete silence—that is, they are not allowed to speak to each other, and only to the patient when the patient first speaks to them. No noise of any sort is permitted in the vicinity of a patient who is undergoing prolonged bathing.

We believe that it is far more satisfactory to employ prolonged bathing in the patient's own room than in a special apartment as

is done in most institutions. First, it is much easier to keep the surroundings of the patient absolutely quiet when the bathing is carried out in the patient's own room than it is in the usual hydrotherapeutic department, where other cases may be undergoing hydrotherapy at the same time. We attach great importance to absolute quiet in the treatment of all cases where there is great excitement, and it is impossible to attain this except the patient be in a separate room. Also it is much more satisfactory to be able to take the patient out of his bath at the end of the day and put him straight into his bed. If, however, prolonged bathing is carried out in a special bathing room, it involves taking the patient backwards and forwards from his room to the bathroom—a procedure which is open to obvious objections.

Hypnotics.—The employment of hypnotics is never resorted to unless all other measures have been tried and failed, although it has been found advisable to administer a small dose of bromide to cases undergoing bath treatment an hour or so before the case is taken from the bath.

Food.—As Dr. Hubert Bond observed in his Presidential Address at the Annual Meeting of the Medico-Psychological Association in 1921, there is undoubtedly a “*spes cenatica*,” which has its influence in building up the desired atmosphere of hope. Monotony, absence of relish and a standard distinctly inferior to that to which patients have been accustomed in their own homes are, when they obtain, serious blemishes. In order to make the taking of meals as agreeable as possible, selected male patients were permitted to have their own mess. This has been found to be a great success. Very popular also has been the dining together of male and female patients at small tables—“restaurant fashion.” Besides relieving the monotony of the daily dinners, the dining together of the two sexes has an admirable effect towards improving table manners and deportment generally.

Every patient is weighed once a month and the weight recorded on a chart. This procedure helps, among other things, to correct loss of weight due to unsuitable dietaries.

Exercise.—Besides the usual outdoor games, such as football, hockey, cricket, croquet, badminton and tennis, there is regular “Swedish drill” for male patients in whom the inclination to take physical exertion can be elicited only through repeated stimulation by way of suggestion, imitation and direct word of command.

Amusements.—Indoor games are encouraged as well as outdoor games. Every evening the recreation rooms are open up to 9 p.m. for reading, writing, cards, chess, dominoes, etc. The gramophone is played and light refreshments are served. Once a week there is a concert and dance. A cinematograph will be shortly installed. A

brass band was started last year under the very competent tuition of a specially selected bandmaster. There are 22 performers, recruited from among the male Indian attendants. The music played by the band is already of quite a good standard, and adds very much to the enjoyment of life of the patients and staff also.

The Hospital possesses a motor omnibus in which 14 patients can go for drives. Weather permitting, patients are taken for drives four times weekly.

Paroles.—To as many patients as possible is the privilege given to go in and out of the Hospital whenever they please up to 9 p.m. No patient is given "parole" unless he (or she) will sign a paper on which is written a promise not to abuse the privilege. At present there are 17 male patients and 10 female patients on parole. "Liberty" is the watchword of the Hospital. Hardly half a dozen doors throughout the whole institution are ever locked, excepting those of store-rooms. During the last three years only two "escapes" have taken place, and of these only one of the two was a "parole" patient.

Occupational therapy.—Occupational therapy is at present the therapeutic sheet-anchor of the Hospital. The lines along which our occupational therapy is organised are largely taken from information that has reached us from the United States of America. Our occupational therapy records are those recommended by Dr. Pollock in vol. vi of the *State Hospital Quarterly*, p. 37.

FIG. 1.—*Prescription for Occupational Therapy.*

Ward	Date		
Name of Patient	Index No.	Sex	Age
Diagnosis	Race		
Physical Diseases or Defects			
Physical Condition			
Mental Condition			
Previous Vocation			
Special Aptitude or Interests			
Type of Occupation Prescribed	Varied	Academic (Other specify)	
Duration			
Rest Periods			
Exercises, Games, Folk Dancing			
Special Instructions			

Signature of Physician.

On admission, or shortly afterwards, every patient is given an occupation prescription (Fig. 1). From this prescription the attendant or nurse in charge of the particular occupation allotted on the prescription to the patient fills in an occupation record card. This is used for compiling a report on the progress or otherwise of the patient, and also for calculating payments due to the patient for work done. Payments are made in cash or kind, as circumstances

seem to indicate would be the most advisable. At the end of each year the work of each patient is tabulated and recorded on a third card, and this card is filed in the patient's case record.

The occupations are divided into six grades as follows :

For male patients.—1st grade: Shorthand writing; clerical; librarian; instructional. 2nd grade: High-class book-binding; high class carpentry; re-stringing tennis rackets. 3rd grade: Middle-class carpentry; sign-board painting; middle-class book-binding. 4th grade: Low-class carpentry; low-class metal work; plain painting. 5th grade: Low-class cane work; net-making. 6th grade: Scraping paint; extracting and straightening nails; sorting coloured beads; winding yarn; coir picking.

For female patients.—1st grade: Instructional; high-class needlework. 2nd grade: Lace-making; cutting out; fancy work; high-class knitting. 3rd grade: middle-class needlework; ordinary crochet and knitting. 4th grade: Low-class needlework. 5th grade: Net-making. 6th grade: Cutting up vegetables; winding wool and yarn; sorting colours.

In spite of this rather careful elaboration of our occupational therapy, I am entirely of the opinion that occupational therapy is a very over-rated therapeutic measure, unless and until it can be made to have some reference to the psycho-pathology of the individual for whom it is prescribed. For instance, we have tried to "sublimate" the grosser scatologic interests of some of our patients by employing them on puddling clay for pottery. I am sorry to say that this has not turned out a success, because a potter's trade is one that needs a long training and much skill. It is obviously impossible to expect patients who are so demented as to be frankly filthy in their habits to be able to pick up the knack of turning out even such a simple thing as a flower-pot.

Psycho-analysis.—We have employed psycho-analysis in a few selected cases. While some considerable measure of success has attended this form of therapy, we have very often to be content with obtaining for the patient a measure of insight into his case, or with the conversion of what Kempf calls a "malignant" psychosis into a "benign" one.

Organotherapy.—This form of therapy has been tried in some cases, but with most discouraging results. Extracts of ovary, thyroid and pituitary have been administered. There are two classes of patients that in addition to the treatment outlined above may be said to get extra "special" treatment: these are "epileptics" and so-called "dirty" patients.

For every epileptic there is kept a special chart on which every fit is noted. By this means an increase in fits can be investigated at

once as to its possible cause or causes. At the same time this chart is very useful in helping to adjust the administration of bromides to the irreducible minimum. Luminal has been tried on some cases of epilepsy with benefit. All epileptics are served with a "salt-free" diet, and their allowance of tea and coffee is a smaller one than that allotted to non-epileptics. All attendants and nurses have strict orders to prevent all epileptics from getting over-tired or unduly excited.

The number of "dirty" patients has been greatly reduced by systematic attention to their excretory needs both by day and night. The inculcation of clean habits is rather a trying procedure for both patient and nurse, as it involves the patient being taken every two hours to the w.c. by night and by day until bed-wetting and defilement of apparel ceases. The trouble this entails is worth while if only to reduce the work of the laundry.

LIBRARIES.

For the use of the medical and nursing staff there is a small but quite good library of 300 volumes of reference, and a good selection of British and American psychiatric journals are taken in. The library is rapidly increasing.

For the patients there is a library in each section of 300 books. Attendants and nurses have instructions to take notes of the books read by patients, in view of the fact that everybody's selection of a book is motivated by some "complex" or another.

ACTS OF VIOLENCE.

Such things as "untearable clothes," "padded cells" and "*hoc genus omne*" are unknown at the Ranchi European Mental Hospital. For the care of the human body as well as for the protection of property we depend upon human agency only—that is to say, on sympathetic personal control. Only on very rare occasions has it been deemed advisable to search the person of any patient for concealed weapons, etc. Systematic searching of the clothing or belongings of patients is never undertaken. Up to the present there has not been a single case of suicide, murder or serious assault among the patients. Two escapes have taken place among the male patients since 1920. One of these patients was brought back the next day; the other is still at large.

SOCIAL SERVICE OF DISCHARGED PATIENTS.

The latest piece of work to be taken up by the Hospital is the endeavour to arouse interest in the public of the larger towns in India in mental hygiene and prophylaxis. There is no organization at

present in India which takes any heed of this very important aspect of psychiatry, but we hope before long to see the public responding to our call, even if it is only to agree to undertake to assist us in keeping us in touch with discharged patients. At present all that we can do in this respect is to circularize each discharged patient with a "welfare inquiry" letter every six months. The first inquiry is made at the expiration of six months from the date of the patient's discharge. Out of the total number of patients treated at the Ranchi European Mental Hospital since November 1, 1919, 78 patients were discharged up to November 30, 1922. Of these three have been re-admitted and two died. Seventy-three patients have now been out of hospital. Of these 73 patients, 29 are now living with friends or relatives, but are still unable to support themselves; 14 are supporting themselves in some career or another; 25 are known to be pursuing their original vocation, while 5 have been lost sight of.

I hope that what has been related of the Ranchi European Mental Hospital will be of some interest to the meeting.

Clinical Notes and Cases.

The Role of Infection in the Treatment of General Paralysis.

W. M. McALISTER, M.A., M.B., Ch.B.Edin., Deputy Superintendent, Royal Hospital, Morningside, Edinburgh.

EVER since Wagner von Jauregg directed attention to the results of the treatment of general paralysis by various infective agencies, this matter has been the subject of active investigation in several centres. From a perusal of the literature it seems clear that the best results have been obtained from infection with benign tertian malaria. Moreover, this mode of treatment appears preferable to many others suggested, in view of the fact that it involves a minimum of risk in its application. Once a suitable malarial patient has been found, it is easy to inoculate many more from him, and the type of malaria which results can be controlled with great facility by means of quinine. An experiment of this sort has been in progress in the Royal Hospital at Morningside under the direction of Prof. George M. Robertson since March, 1922, and the results which have so far accrued are shown in the accompanying table. The method of inoculating the general paralytic and the details of the subsequent treatment need not be recapitulated here, as they are fully dealt with in the issue of the *British Medical Journal* dated October 20, 1923.

CASES OF GENERAL PARALYSIS INOCULATED WITH MALARIA.

Case No.	Duration of disease.	Malarial incubation period.	No. of attacks.	Average temperature.	Result.
1	2½ years	—	—	—	Died of intercurrent peritonitis.
2	3 „	—	—	—	Removed from Morningside.
3	11 months	28 days	8	103.4	Now having almost complete remission. See Case 1 below.
4	3 years	12 „	3	104.5	Died 30.5.23. Course of G.P.I. not affected. Had tabs for 3 years previously.
5	3½ „	12 „	9	103.8	Not improved; has not deteriorated further.
6	1½ „	32 „	11	104.2	Much improved physically and mentally.
7	6 months	9 „	11	104.4	Deterioration arrested.
8	2 years	9 „	9	103.8	Partial remission.
9	2 „	9 „	8	104	See Case 2 below.
10	2 „	11 „	12	103.6	Partial remission.
11	4 „	8 „	12	104	Not affected physically. Mentally more responsive and alert.
12	4 „	9 „	11	103.8	No apparent change.

It may be of interest to describe in detail the records of two cases taken at random from the group :

CASE 1.—A. B. C., male, æt. 46, was a clerk in the police office. He was admitted to Craig House on April 7, 1922, but for about a month before admission had been showing signs of serious mental disorder. His wife and his fellow officers had noticed that he was becoming more and more confused and absent-minded. In his work he had to supervise the compiling of statistics, and his last effort to work these out was most inaccurate. He also had to keep a calendar of important appointments for his superior officers, and he produced great confusion by arranging these for the wrong dates. As the disorder developed he became very extravagant. He went to a local emporium and ordered an outfit fit for a prince, his intention being to take a year's holiday and tour the world. At this stage he was seen by the police surgeon, who recommended a month's leave at the seaside. No benefit resulted. Indeed, from his conduct it became clear that the deterioration was now developing apace. He began to formulate schemes for "breaking the book-makers," and reckoned that in the course of a day or two anyone who followed his plans could clear a million. He set up as a prophet, pretending to be able to forecast the winner of the golf championship, and naming the first three horses in the Derby. Needless to say he himself was to be the hero of both these events.

His family history contained no record of insanity. He married about eight years ago and had three children, of whom the youngest died at the age of two years from broncho-pneumonia. The other two children are said to be in good health.

State on admission.—Patient was well-nourished and physically well set-up. On examination the right pupil was found to be about twice the diameter of the left. The smaller pupil was fixed, but the right pupil gave an approximately normal reaction. The face as a whole was amimic, and there was a fine tremor about the lips which was accentuated when he spoke. The tongue was tremulous and the speech movements ataxic. His gait also was slightly ataxic, the knee-jerks on both sides being absent even on reinforcement. Mentally he was somewhat confused, and had a marked dysmnnesia for recent events. He was highly elated, being specially concerned to impress everyone with his prowess at golf. He admitted that for the moment he was a poor man, but that his winnings at golf and on the turf would soon make him the richest man in the world.

The blood and cerebro-spinal fluid alike gave a strong positive Wassermann reaction, six doses of complement being deviated in each case. The colloidal gold reaction read 01334422000, and the condition was then diagnosed definitely as general paralysis.

Subsequent history.—The subsequent history until the date of his treatment was typical of such cases. He was always highly elated, and expressed numerous delusions of grandeur of a more or less fleeting character. In spite of that, there was nothing aggressive about his manner. He wore habitually an air of modesty, and referred to his achievements in a somewhat patronizing and offhand fashion. Now and again he was irritable and complained bitterly of the restraints imposed on his wayward tendencies. At such times he was apt to become highly excited, and demanded the immediate attention of the police to the indignities to which he was exposed. He threatened to bring actions for damages for illegal detention amounting altogether to five hundred millions. These moods, however, were transitory, and with a little tact he could easily be diverted to a more placid frame of mind.

Appended is a letter which the patient wrote in May, 1922, and which gives a good idea of his mental state before treatment.

Craig House,
Edinburgh,

27.5.22.

DEAR JOHN,—You will be astonished to learn that when the Professor recommended me to come here for rest and treatment for neuritis, and being run down, I was received and treated as a dangerous lunatic.

It took me a week to teach the Doctors that I had more brains and power than they had altogether.

I intend escaping over the roof this afternoon and will call for the Chief to give me 60 men to clear up this Hill and arrest all the Doctors and Attendants. I am also going to arrest the Provost and Council as they are in the main responsible for the conduct of this place.

This case will shake up the whole world to think that an intelligent City like Edinburgh should carry on a constitution where any brainless Doctor at the request of a wife may have her sane and reasonable husband detained for life as a lunatic.

To come to personal matters and without undue vaunting, I am the most perfect man God has created. You will find that I am an author of great power, a poet unsurpassable, a runner who when timed two weeks ago ran 100 yards in $6\frac{1}{4}$ secs., 65 miles per hour. I beat Fernie on his course at Troon by 16 holes in 71 to his 70, I would easily have won the Amateur Championship but the Doctors here were too many for me. I am also the first baritone singer in the world, and one of the greatest pianists.

I have a strength that would make Samson and Goliath feel like infants.

I am going to challenge Dempsey in June and will knock him out under 3 rounds. He will never be able to hit me as I am as fast as lightning and my guard is unsurmountable.

I apologise for inflicting all this vaunting on you but I know it to be solemn truth.

Trusting you and Mrs. D— are keeping well. I intend retiring when I return, and will ask the C.C. to give me the Hon. rank of C.C. to retire. I am a multi-millionaire having solved the betting question. After three weeks very heavy thinking my brain which the Doctors thought affected solved this question.

You may tell all my comrades of this discovery and they can all join me in the ranks of the millionaires.

The explanation of the gambling question is that you back all the horses running so that you see you cannot lose.

If you put £1 on all the horses in the first race keep putting the winnings on the other horses you will finish the day with a fortune of from six to ten million pounds. I am also informing the Bookmakers of this method of betting, so that they may recoup themselves for the large sums they will have to pay out.

Yours very sincerely,

A. B. C.

P.S.—I am calling a meeting for Tuesday next in the Caledonian Hotel of all the reigning Kings, Presidents and Houses of Parliament, Ambassadors and Equerrys. My questions to be raised are :

1. My payment of the National Debt.
2. My being Crowning King of the Whole World.
3. Amendment of the Criminal Laws making capital punishment applicable to cases of assault and robbery, assault, rape, theft, fraud, etc.

I do not think the Government will refuse my terms, and I will certainly fill the Throne as Monarch better than it has ever been filled.

I am also appealing to be created the Duke of Loch Lomond and New Zealand to have the great honours of K.T. & K.G.

I intend settling in New Zealand but will always have a house in Edinburgh and London.

Let me know in what way I can serve you and I will be only too pleased to do so.

Yours sincerely,

A. B. C.

Treatment was begun on March 28, 1923, when the disease had already lasted for almost twelve months without remission. Two c.c. of venous blood from a malarial patient were injected into the subcutaneous tissues between the shoulder-blades. On the 28th day thereafter he had his first rigor, and when the temperature was at its highest the plasmodium was found in large numbers in the peripheral blood-stream. The malaria ran a quite regular course, and in all eight attacks were allowed to develop. On the whole the treatment was well borne, though there was a marked degree of anæmia towards the end of it. After the eight attacks quinine hydrochloride was administered, and was immediately effective. At the same time a course of novarsenobillon (·3 grm. per dose) was started, one injection being given weekly. Within a very short time all the signs of malarial infection had completely disappeared.

As regards his condition after treatment, there is no change in the Wassermann reaction, either in the blood or in the cerebro-spinal fluid. The patient has improved physically. The physical signs of general paralysis are still present, but they do not obtrude themselves so readily on one's notice. The most important change is in the mental attitude of the patient. While there remains a slight degree of euphoria, that is but a pale shadow of his former exuberance. He never expresses any delusions now, and has even got the length of repelling any hint that he may be a person of great importance. He appears to have a considerable measure of insight into his state; his memory is more trustworthy and his orientation is correct. Whereas formerly his interests were entirely self-centred, he is now able to follow the trend of current events. On the whole he may be described as being in a state of almost complete remission of his symptoms, and were it not for the slight elation and the suggestion of slight general enfeeblement, he might be regarded as a recovered case.

CASE 2.—Male, an insurance clerk, æt. 53, and married, but had no family. He was admitted to Craig House on April 13, 1921, with a history of having been in indifferent health for three months previously. A specific basis of his illness

was suspected in view of the fact that he had consulted his doctor about a year previously for aortic disease, and at that time had admitted luetic infection. Further, it transpired that he had had a hard sore in 1892. He had numerous lapses in judgment from time to time and his business affairs become hopelessly involved. Side by side with this there developed an increasing indifference to his own personal appearance. There were at no time grandiose delusions of extravagant actions, but just a gradual deterioration, almost imperceptibly becoming worse. In the end he became quite irresponsible, was disoriented, slovenly in his habits, and his memory, especially for recent events, markedly defective.

State on admission.—On admission to Craig House on April 13, 1921, he appeared composed and spoke in a slow, deliberate fashion. It was obvious, however, that he was confused and in fact apathetic. Physically he looked haggard and presented many of the stigmata of general paralysis. His facial muscles were tremulous, the pupils equal and contracted, but very sluggish in their reaction to light. His face had a mask-like expression, and he had difficulty in negotiating the usual test phrases. The deep reflexes were uniformly exaggerated. The blood and cerebro-spinal fluid alike gave strong positive Wassermann reactions, eight doses of complement being deviated in each case. There was also a distinct lymphocytosis and excess of globulin in the cerebro-spinal fluid. The colloidal gold reaction gave a positive curve.

Subsequent history.—The patient deteriorated rapidly. He was almost invariably confused, amnesic, slovenly in his habits and indifferent to his surroundings. He had several bouts of severe seizures which reduced him still further until eventually he was completely bedridden. His speech became so disorganized that he could only be followed with great difficulty, and the pitch of his voice altered to a high falsetto. When he attempted to write, his caligraphy showed the usual lapses common in such cases. His sphincter control was impaired, and partly on that account and partly because of the general trophic disturbance his skin and muscular tissues were in poor condition. His mood during this phase showed occasional slight variations in the direction of elation and irritability, but on the whole he was dull and apathetic.

The treatment was identically the same as in the last case, and was begun on the same date. The incubation period was nine days, and the number of rigors eight. The treatment had somewhat exhausted him, and in view of his serious condition before treatment, it was deemed prudent to arrest the infection earlier than might otherwise have been done. He, too, responded immediately to the exhibition of quinine, and had a similar course of novarsenobillon.

In this case the improvement which occurred after the treatment was manifested in the better physical state of the patient. He began to put on weight rapidly, and was soon up to his normal standard. The signs of general paralysis were still present, and the reactions of the blood and cerebro-spinal fluid remained unaltered. His co-ordination, as illustrated by his speech and his gait, were greatly improved. His writing, however, was still typical of general paralysis. The most conspicuous change was in his personal habits, which previously had been slovenly. He now became meticulously careful about all his private possessions, and was most tidy in his dress and solicitous about his personal appearance. There were no other evidences of mental improvement.

He remained in this state for seven months, and then quite suddenly broke down again, and in the course of a day or two lost all the ground

he had gained. On October 28, 1923, a fatal termination ensued, ushered in by a series of paralytic seizures and hyper-pyrexia.

A *post-mortem* examination was made of the central nervous system, and the findings were highly typical of general paralysis. Meantime microscopic preparations are being made, and will be reported later.

GENERAL CONCLUSIONS.

Caution is needed in interpreting such results owing to the well-known tendency for the disease to show natural remissions. Considering cases as a whole one must conclude that :

1. The cases in which the treatment has been most successful have been those in which it was undertaken early in disease. This is what one would expect, seeing that the latter stages of general paralysis are accompanied by gross organic changes in the central nervous system, and that the repair of this highly specialized tissue can hardly be looked for.

2. The treatment does not modify the laboratory findings.

3. The malarial treatment seems to promise a retardation in the usual rate of deterioration. In some cases a more or less complete remission of the symptoms has been obtained.

4. Of the two factors supposed to be at work, namely temperature and leucocytosis, temperature appears to play a larger part than leucocytosis. In another series of Morningside cases it was conclusively shown that, while a leucocytosis without temperature could readily be produced, the effect on the development of general paralysis was negligible. It may well be, however, that the treatment ultimately depends upon a biological factor, the malarial infection developing anti-bodies hostile to the spirochæte of syphilis.

5. It is impossible to distinguish clinically natural remissions from those produced artificially. Until a very large number of cases have been treated in this way it would be impossible to eliminate the possibility of mere coincidence in the results.

Malaria Therapy in General Paralysis : being Observations on Fifty Cases treated at the County Mental Hospital, Whittingham. By A. R. GRANT, M.B., Ch.B.Aberd., and J. D. SILVERSTON, M.B., B.S.Durh.

IN the early part of 1922 our attention was drawn to the excellent results claimed by Wagner-Jauregg (1), Gerstmann (2), Weygandt (3) and others in the treatment of general paralysis by the inoculation of malaria. Since July 31, 1922, over fifty general paralytics have been subjected to this form of fever therapy, and in this contribution

we propose to give a brief summary of our observations and conclusions.

The cases were not specially selected; they varied from early to advanced stages. In all, the clinical diagnosis was confirmed by corroborative findings in the blood and spinal fluid. The lumbar fluid in all cases gave paretic curves in the gold-sol and colloidal-gamboge reactions (4), a hyperalbuminosis, a pleocytosis ranging from 10 to 292 lymphocytes per c.mm. (Fuchs-Rosenthal), and a positive Wassermann reaction.

In our earliest cases inoculation was tried using the subcutaneous and intravenous routes, singly, and combined, with different samples of blood taken from cases suffering from *benign tertian* (2), *quartan*, and *malignant tertian* respectively, but in whom quinine therapy had not been instituted. From Case 9 onwards, however, one strain of *benign tertian* was used exclusively, and injected by the subcutaneous channels. This malaria stem has now passed through nineteen hosts (male and female), and is at present in use in other hospitals.

The technique employed for inoculation is simplicity itself.

From a patient who has had no form of quinine medication, and in whose blood-films B.T. parasites are demonstrable, 2 to 3 c.c. of venous blood is withdrawn and immediately injected under the skin of the interscapular region of the recipient. Where the donor and recipient cannot be brought together the blood may be citrated and injected with equally good results, provided of course that the parasites are kept at body heat and for not too long a period. In one case a successful result was obtained five hours after the withdrawal of blood. The blood for injection may be taken in the early or late stages of the disease, during the paroxysms or in their intervals. After a period of incubation varying from five to twenty days—time of incubation measured by first appearance of parasites—attacks of malarial fever appeared in which the temperature often rose to 40° or 41° C., commencing with rigors and ending with a sweating stage. As a general rule and where the therapy was well tolerated from eight to fourteen chills were permitted. In females, and in those male cases which showed signs of increasing intolerance, the fever was arrested following the sixth to the eighth paroxysm. Jaundice occurred in one of our cases and was an indication for cutting short the induced disease.

The type of fever varied. Usually the quotidian developed, but occasionally the course was mixed, the initial paroxysms being tertian and the later ones quotidian. Blood-films from each case were examined daily for a period of three months in order to determine the onset and close of the fever and relapses, if any.

The malaria fever was promptly and effectively cut short by the oral administration of quinine sulphate in doses of gr. x *t.d.s.* for three successive days. The fever disappeared immediately, whilst the parasites speedily and progressively decreased, so that on the evening of the second day of the institution of the anti-malarial treatment no plasmodiæ were to be seen in the films or in the fresh blood. In one case the effect was similar, following the intravenous injection of 0.15 grm. arsenobillon. Spontaneous cure occurred in only one of our cases (*vide* Case 21 in table).

Two cases that had been inoculated failed to show up any clinical or blood signs of malaria infection in spite of provocative injections of phlogetan and adrenalin. Reinoculation four to five weeks later with malaria-infested blood was successful on both occasions. Again, in a case where, following one or two chills, it became evident that the patient was not doing so well, the fever was immediately arrested by quinine and the patient given a rest. Allowing for a full month interval after the quinine had been stopped a second inoculation was given, and on this occasion the patient tolerated the fever very well. Reinoculation was also successfully performed in two cases which did not seem to show much mental improvement following their first course of fever treatment. Seemingly, in this form of inoculable malaria, one attack of fever does not confer immunity to a second infection.

Concurrently with the disappearance of the parasites from the blood a course of neosalvarsan was begun (intravenous injections once a week for six weeks, commencing with 0.3 grm. and working up to 0.6 grm.). In eighteen of our fifty cases this combined form of treatment was carried out. The neosalvarsan acts not only against the syphilis, but also against the malaria. Latterly we have been using the silver preparation of salvarsan, and it is interesting to note at this stage that two cases who up to the time of writing have done well were not given any form of arsenical treatment.

During the malarial attacks, visual and auditory hallucinations, ideas of persecution and delirious states were occasionally noticed. With the introduction of quinine medication these phenomena mostly disappeared, and the splenic tumours, which never reached any considerable size, retreated quickly.

The following table is a synopsis of the whole range of cases, but owing to lack of space we are unable to include the serological findings of the blood and spinal fluid.

A relapse occurred in one of our cases (*vide* Case No. 37). It is the only one of our cases to suffer in this way, and we believe it to be the first reported in the literature on the subject of malaria therapy in general paralysis of the insane.

TABLE OF CASES.

No. of case.	Age.	No. of patient inoculated from.	Date of inoculation.	Date of first rise of temperature.	Date of appearance of parasites.	Date of giving quinine.	Date of disappearance of parasites.	Remarks.
1	42	At Liverpool	21.7.22	1.8.22	6.8.22	7.9.22	11.9.22	Quartan.
2	36	"	21.7.22	30.7.22	11.8.22	4.9.22	11.9.22	"
3	31	"	21.7.22	—	—	—	—	Malignant tertian.
4	31	I	6.9.22	29.9.22	27.9.22	3.11.22	10.11.22	Recovered.
5	42	At Liverpool	11.8.22	17.8.22	24.8.22	4.9.22	6.9.22	Benign tertian intravenously; quartan subcut.
6	32	"	11.8.22	12.8.22	21.8.22	—	—	Died. Advanced case. Cardiac failure.
7	50	I	6.9.22	21.9.22	24.9.22	29.10.22	2.11.22	Quartan.
8	38	At Liverpool	8.9.22	20.9.22	28.9.22	3.10.22	6.10.22	Died. Cardiac failure. Quartan.
9	32	8	14.11.22	—	—	—	—	Recovered. Benign tertian. N.
10	58	8	14.11.22	28.11.22	2.12.22	25.1.23	23.1.23	Benign tertian.
11	20	10	7.1.23	15.1.23	14.1.23	23.1.23	28.1.23	—
12	50	10	7.1.23	23.1.23	20.1.23	7.2.23	—	Died. Intercurrent affection.
13	42	11	23.1.23	10.2.23	7.2.23	15.2.23	—	Died. Intercurrent affection. Advanced case.
14	36	11	23.1.23	9.2.23	14.2.23	3.3.23	6.3.23	—
15	32	12	6.2.23	20.2.23	20.2.23	12.3.23	14.3.23	Recovered.
16	34	15	5.3.23	14.3.23	15.3.23	16.4.23	19.4.23	—
17	42	15	9.3.23	15.3.23	15.3.23	16.4.23	19.4.23	N.
18	36	15	9.3.23	17.3.23	19.3.23	7.4.23	9.4.23	N.
19	39	16	31.3.23	10.4.23	14.4.23	30.4.23	2.5.23	—
20	48	16	21.3.23	6.4.23	6.4.23	20.4.23	21.4.23	Died. Intercurrent affection.
21	44	16	19.4.23	29.4.23	28.4.23	—	12.5.23	Spontaneous recovery from malarial attack.
22	41	21	7.5.23	9.5.23	19.5.23	27.5.23	30.5.23	—
23	53	21	20.5.23	30.5.23	3.6.23	12.6.23	14.6.23	—
24	44	23	5.6.23	15.6.23	18.6.23	30.6.23	3.7.23	N.
25	52	23	5.6.23	15.6.23	18.6.23	25.6.23	1.7.23	—
26	54	23	5.6.23	14.6.23	15.6.23	21.6.23	1.7.23	Recovered. N.

TABLE OF CASES—(continued).

No. of case.	Age.	No. of patient inoculated from.	Date of inoculation.	Date of first rise of temperature.	Date of appearance of parasites.	Date of giving quinine.	Date of disappearance of parasites.	Remarks.
27	44	26	19.6.23	21.6.23	26.6.23	8.7.23	11.7.23	N.
28	43	26	19.6.23	21.6.23	25.6.23	13.7.23	17.7.23	N.
29	37	28	3.7.23	10.7.23	15.7.23	22.7.23	25.7.23	N.
30	46	28	3.7.23	10.7.23	11.7.23	20.7.23	20.7.23	—
31	41	29	16.7.23	29.7.23	1.8.23	8.8.23	11.8.23	N.
32	30	29	20.7.23	22.7.23	27.7.23	9.8.23	11.8.23	N. Recovered.
33	52	29	20.7.23	1.8.23	2.8.23	14.8.23	17.8.23	N.
34	38	32	31.7.23	8.8.23	11.8.23	—	23.8.23	N. 0.15 gr. 914 given instead of quinine on [22.8.23.
35	47	32	5.8.23	13.8.23	18.8.23	23.8.23	26.8.23	Died. Cardiac failure.
36	44	32	6.8.23	7.8.23	20.8.23	27.8.23	30.8.23	—
37	41	32	13.8.23	22.8.23	27.8.23	12.9.23	16.9.23	N. Recovered. Malaria relapse 29.10.23.
38	38	34	22.8.23	31.8.23	1.9.23	12.9.23	16.9.23	N.
39	44	32	22.8.23	9.9.23	9.9.23	15.9.23	16.9.23	N.
40	46	33	27.8.23	4.9.23	5.9.23	17.9.23	18.9.23	Died. Advanced case.
41	56	34	8.9.23	15.9.23	16.9.23	24.9.23	29.9.23	Recovered.
42	42	33	13.9.23	20.9.23	Not found	21.9.23	—	Malaria cut short on account of physical condition of patient.
43	57	41	21.9.23	23.9.23	28.9.23	11.10.23	14.10.23	—
44	45	41	24.9.23	25.9.23	8.10.23	20.10.23	23.10.23	—
45	39	43	4.10.23	11.10.23	12.10.23	25.10.23	30.10.23	N.
46	35	43	5.10.23	7.10.23	21.10.23	3.11.23	6.11.23	N.
47	56	43	8.10.23	16.10.23	18.10.23	24.10.23	28.10.23	—
48	51	46	26.10.23	6.11.23	8.11.23	23.11.23	26.11.23	—
49	42	46	24.10.23	25.10.23	5.11.23	28.11.23	29.11.23	—
50	52	46	3.11.23	8.11.23	21.11.23	—	—	At present under treatment.
51	47	49	19.11.23	28.11.23	28.11.23	—	—	" "
52	43	49	19.11.23	28.11.23	28.11.23	—	—	" "

N. = A course of salvarsan (neosalvarsan or silversalvarsan) was given.

Important data relevant to this case are as follows :

B. W. M—, male, æt. 41, admitted May 24, 1923. An early case of general paralysis with grandiose delusions.

History.—There is no record of his having lived in any malaria-infested region, either in this country or abroad. He has served with the forces in France only, and his military case-sheets show that he was never confined to bed with any serious illness. For several months prior to admission patient states that he suffered periodically from "shakes," which made him feel cold during the hottest of days. These "shakes" came on at very irregular intervals, but never inconvenienced him to the extent of his having to consult a doctor. He denies venereal infection. He has had lupus vulgaris affecting the face since the age of 10.

Malaria therapy was commenced on August 13, 1923, and B.T. parasites were first demonstrated on the 27th of the same month. After having had fourteen rigors (temperature reaching a maximum of 40.5° C.) quinine medication was begun on the evening of September 12, 1923, and continued for the next three days—6 grms. in all were given. Blood-films examined from September 16 to October 28 failed to reveal the presence of plasmodiæ. Coincident with the disappearance of the parasites (September 17, 1923) a course of neosalvarsan was commenced. Weekly doses of 0.3, 0.4, 0.4 and 0.5 grm. 914 respectively had been administered up to October 29, when the patient took suddenly ill with a rigor. This occurred about 8.30 a.m. The chill had all the characteristics of a malarial paroxysm, and during this period his temperature reached a maximum of 40° C. The temperature came down to normal within six to eight hours, during which the patient perspired profusely. Quinine sulphate gr. x was administered at this stage and continued *t.d.s.* for the next three days, when it was stopped. Blood-films taken every two hours from the very onset of the rigor showed the presence of B.T. rings and Schüffner's dots in the red corpuscles. No schizonts or gametes were found at this stage. Parasites appeared right up to the evening of the following day, when they completely disappeared. Up to the time of writing this patient has had no further clinical or blood relapses.

There is a marked improvement in the patient's mental and physical state, and his wife, who wrote to us the other day, states that she thinks he has made a wonderful recovery. Should his remission continue unclouded he will be discharged to his home at the end of this month.

The following cases present features of interest :

CASE 1.—E. M— (Case No. 8), male, æt. 37; admitted July 11, 1922.

History.—Patient served in the Army during the war, and was discharged as unfit in November, 1916, after having sustained a head wound with a fragment of shell. He resumed his pre-war vocation and worked regularly until May 9, 1922, when he attracted the attention of his fellow-workmen by an "emotional outburst." He has had no serious illnesses and denies venereal infection.

On admission patient was mentally confused, and unable to answer simple questions coherently and relevantly. He was completely disorientated for time and place.

Physical examination.—Physique poor, heart, lungs and abdominal organs apparently normal.

Nervous system.—Right pupil small, slightly irregular, dir. and cons. reactions to light brisk. Left pupil dilated, irregular, dir. and cons. reactions to light very sluggish. Both pupils reacted to accommodation, but sluggishly. Tongue, lips and speech seemed apparently normal, but at times there developed a slight hesitancy and tremulousness in the articulation of certain test-words. Knee-jerks equal and increased; plantar responses both flexor. Romberg *nil*. Superficial reflexes equal and normal; sphincters and gait normal.

Blood.—Wassermann positive 1 in 5 dilution.

C.S.F.—Paretic curves in gold-sol and colloidal-gamboge reactions, globulin ++; pleocytosis 196 small and large lymphocytes per c.mm.; Wassermann reaction positive.

Patient was inoculated with B.T. malaria on September 8, 1922, and with the onset of the fever patient became much worse mentally. From being apathetic and disinterested in his environment, he became vividly hallucinated, wildly

aggressive, and eventually intensely homicidal. He maintained that he was being deliberately deceived as he could hear people calling him a syphilitic. He gradually developed suicidal tendencies, and persistently refused his food. This psychotic exhibition outlasted the malarial infection and persisted until the last day in May, 1923, when his mind suddenly "found itself." He steadily and rapidly improved, and within a short space of time he was up and about, working in the wards, chatting freely to everyone and showing a remarkable degree of insight into his former and present states. He was discharged in a state of complete remission on June 30, 1923, and has since resumed his former employment. In the course of his treatment he received 6 grm. of quinine and 1.3 grm. of neosalvarsan.

CASE 2.—J. W. B.—(Case 25), male, æt. 52; admitted December 15, 1921.

History.—Patient states that he contracted syphilis in 1906. He was diagnosed as a case of general paralysis in 1915 in another mental hospital, and was discharged presumably in a state of remission in the following year.

On admission he was hilarious, excited, and deluded that he was engaged to Princess Mary, and possessed millions of money.

Physical examination.—Physique poor; heart, lungs and abdominal viscera apparently normal.

Physical signs of general paralysis well marked, with lingual and labial tremors, speech defects, and spastic pupils. Cerebro-spinal fluid: paretic curves in gold-sol and colloidal benzoïn reactions; globulin ++; pleocytosis 61 small and large lymphocytes per c.mm. Wassermann reaction positive.

His condition rapidly passed into a state of remission, and he remained well until November, 1922, when his gait was noticed to be unsteady and at times tottering. He was put to bed, but his condition grew steadily worse, and in May, 1923, he had several epileptiform seizures. He rapidly lost weight, became wet and dirty in his habits, and eventually developed a bed sore over the sacrum. It was then decided to inoculate him with malaria, and this took place on June 5. The fever was cut short by quinine on the eleventh day owing to his exhausted physical state and low vitality. Patient gradually improved in his physical and mental states, and has now regained sufficient strength to walk about quite comfortably and without assistance. The bed sore has now completely healed. He is in a state of partial remission with a certain amount of residual psychical defect. His reaction times have improved, convulsive attacks have been absent, and his speech has become more coherent and distinct. Neosalvarsan was not given in this case.

COMMENT.

Of 50 cases of general paralysis treated,

(1) 7 have completely recovered—recovered in the sense that they are in a state of complete remission, and regained their full working power, and are free from demonstrable psychical defects.

(2) 33, mostly cases in the late stages, have become stationary or are showing a partial remission with residual psychical defects. Three cases are still under treatment.

(3) 7 (5 male, 2 female) died.

The complete remissions occurred in early cases—duration of the disease process not averaging more than twelve months. This improvement occurred in a pronounced fashion in clinical types of the disease (depressed and demented), where remissions are rather the exception than the rule. We are not yet in a position to state whether these recoveries will be permanent, as our earliest remission commenced roughly in March last.

The second group were comprised of cases in the late stage of the paralytic process, in which we had very little hope of meeting with

any measure of success, but the experiment has been justified as they all have shown very pronounced physical improvement, while some have recovered sufficiently to be allowed home to the care of their friends. We have seen depraved and bedridden patients reform their habits and become quite capable of going about without arousing attention. Convulsive attacks have become less frequent, as during the past sixteen months only three seizures have been reported.

We are greatly indebted to Profs. Stephens and Yorke, of the School of Tropical Medicine, Liverpool, for their advice in this work. At present we are collaborating with them in the investigation of the problem of employment of infected mosquitoes. This experiment has been prompted by the well-known fact that malaria parasites do not live outside the body for very long, although we have been able to inoculate a case with success five hours after withdrawal of the blood from the donor.

We beg to thank Dr. R. M. Clark, Medical Superintendent, under whose general supervision this work has been carried out, for permission to publish these results.

CONCLUSIONS.

1. Malaria therapy in general paralysis is justified ; the technique is simple, and the artificial fever induced is easily, promptly and effectively controlled by the administration of quinine. Malaria relapses are rare : only one occurred in our list of cases.

2. One attack of artificial malaria does not confer immunity to a second inoculation.

3. Early cases offer the most hopeful prognosis.

4. Complete remissions occur in all the clinical types of the disease.

5. The remissions are more pronounced and more frequent than those met with in untreated cases.

6. In the majority of cases it arrests the progress of the disease and prolongs life.

7. Recovery does not always take place promptly at the end of the malaria infection, but often slowly over an indefinite period of time.

8. No case with an initial complete recovery has had a relapse.

9. Equally good results have followed malaria treatment only, without additional arsenical medication.

10. In late cases there has been definite improvement physically, whilst some have recovered sufficiently in their mental balance to be allowed home to the care of their friends.

The correlation of the clinical findings with the changes, if any, in the serological reactions of the blood and cerebro-spinal fluid following this form of fever therapy is at present occupying our

attention, and the conclusions arrived at will form the subject-matter of another communication.

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Relapsing Fever Therapy in General Paralysis : Clinical Notes on a Case of Paresis treated with African Tick Fever.
By J. D. SILVERSTON, M.B., B.S. Durh., Assistant Medical Officer,
County Mental Hospital, Whittingham, Preston.

RELAPSING fever as a curative agent in paresis has been tried as far back as 1921, when several continental observers favourably commented on it. The close similarity between the two diseases in their causal agents and blood-serum reactions strongly commends the theory that the induction of a spirochætal fever in general paralysis might lead to the production of immune and anti-bodies in sufficient amount as to effect an amelioration in the symptoms, if not a complete arrest in the progress of this deadly malady.

Profs. Stephens and Yorke, of the School of Tropical Medicine, Liverpool, were consulted in the matter, and they advised us to have our patients inoculated with African tick fever (*Spirochæte Duttoni*) by means of infected ticks which had been allowed to suck the blood from patients suffering from that disease. The transmitting agent was of the adult female class, and of the species of *Ornithodoros moubata*. The ticks arrived from Rhodesia in June, 1923, and the inoculation of our three cases took place a short time after their arrival.

The three cases were of undoubted general paralysis which had as yet not been subjected to any form of fever therapy. Four to five infected ticks were allowed to feed on the volar surfaces of both forearms of each patient until they had gorged themselves with blood, and had smeared in the areas of the bite punctures the secretions from the coxal glands and Malpighian bodies. In this way in all probability the spirochætes or the granule bodies gain an entrance to the general circulation.

Two of the cases failed to show up any clinical or blood signs of the infection, but the third passed through a mild attack, consisting of one paroxysm, one relapse, and a spontaneous cure. Interesting features of this case are as follows :

Male, æt. 44, dock labourer, admitted February 22, 1923.

History of present illness.—In August, 1920, patient complained of neurasthenia with loss of memory, which he attributed to war service. He had never received any serious injury during his five years' service with the forces, and was discharged in May, 1919. He gradually became worse, and was sent to the union workhouse for observation in February, 1923, owing to numerous transient attacks of aphasia and delusional states.

Personal history.—Patient contracted malaria in South Africa in 1901, but must have suffered a mild attack as he says it invalidated him for two weeks only. In 1902 he was infected with *Spirochæta pallida* and received treatment with KI and Hg for eighteen months, after which he was discharged recovered. He is a married man with three apparently healthy children, the first six of the progeny having died *in utero*.

On admission.—Patient states that he is still a soldier in His Majesty's Army and that he is at present on leave. He is paramnesic, as he believes he has been here with his wife several months ago. He maintains that he is in labour and expects to give birth to a child this evening at 9 p.m. He is disorientated for time and place and cannot recollect any incidents of note during the past few days.

Central nervous system.—The main physical signs are: Pupils small, unequal, and irregular; reactions (D. and C.) to light extremely sluggish; to accommodation sluggish; oscillatory phenomena and oculo-spinal reflexes present but sluggish. Speech slow, hesitating and slurred; lingual and labial tremors well marked. Upper limbs—deep reflexes exaggerated, hand intention tremors. Lower limbs—knee-jerks ++; T. A.'s absent; plantar responses flexor; no clonus. Superficial reflexes of abdomen diminished but equal. Gait and sphincters normal.

Cerebro-spinal fluid.—Paretic curve in gold-sol and colloidal gamboge reactions, globulin increase, pleocytosis 221 small and large lymphocytes per c.mm., Wassermann reaction positive.

Blood.—Wassermann reaction positive in a 1 in 40 dilution.

Course of illness.—Inoculation by means of *Ornithodoros moubata* took place at 11.15 a.m. on June 11, 1923, and after an incubation period of four days there occurred a rapid rise of temperature to 101.2° F., when patient complained of a sensation of chilliness.

June 16: Temperature dropped rapidly to 96.8° within 8 hours, but in the afternoon and evening steadily rose to 100.8° F. This level was maintained with slight variations to the end of the 19th, when the temperature commenced to come down by lysis, reaching the normal on the 22nd.

June 18: This morning patient complains of severe but wandering pains in the lumbar region, both lower limbs and the right shoulder-joint.

June 19: This is the fourth day of the fever. Last night and during the early hours of this morning he became very restless, repeatedly wandered away from his bed, and talked in a rambling manner about various people he could see. He is able to give me a graphic account of these hallucinatory states of the previous night and this early morning. He states that he saw amongst the trees several men clothed in foliage spying on the place. He further maintains that he got out of bed and caught hold of one of these men, whom he described as a nigger with big rough Russian whiskers and 6 ft. 3 in. in height. The latter said to him that when he left the hospital he would be arrested and later blown up. The nigger then ran along an alley way, but was met by a big fellow dressed like a German policeman, who hit the former on the head with a baton and stunned him. "The pseudo-German policeman came up to me and asked me where I lived and gave me warning that a bomb was to be placed on my house. Everything then disappeared and I fell asleep."

June 20: The whole of the body this morning, except the face, which is flushed, is covered with an erythematous skin eruption. The rash is roseolar, dark pink in colour, and fading on pressure. The individual elements show a tendency to run into circular and triangular patches. The rash is thickest on the back of the trunk and on the extensor surfaces of the thighs, knees, arms and elbows. A few spots only are to be seen on the front of the chest and abdominal wall.

June 21: Rash fading and not as conspicuous as yesterday. The spleen has not been palpable throughout the illness.

June 22: To-day marks the end of the pyrexia, which has lasted six days.

Temperature has come down by lysis, taking forty-eight hours in its drop from 101.2° to 96° F. Patient feels quite well and states that he would like to get up. Rash persists on back of trunk, but is rapidly fading. All other sites are clear and show no signs of commencing desquamation.

June 24: Following an apyrexial interval of two days the temperature this morning rapidly rose from 96.2° to 99° F. and lasted throughout the day.

June 25: This is the second day of the relapse, and actively moving spirochætes persist in the blood. This evening patient is mentally confused and talks vaguely of his having been decoyed here, that he is not going back to Whittingham, and that he would like to kill himself.

10 c.c. of venous blood, at this stage, were withdrawn and injected subcutaneously into the interscapular region of another parietic, but the inoculation proved a failure.

No further relapse took place and spirochætes were never again found in the blood. No specific treatment was instituted, and one may assume that a spontaneous cure took place.

Subsequent course.—From July to October patient seemed much brighter mentally. He became more talkative, and discussed topical events in a very open-hearted but level-headed manner. He refuted his former delusions and hallucinations and attributed his lapse to some brain storm. His paramnesic states have completely disappeared. He has been out on parole in the mental hospital grounds during the past two months.

Cerebro-spinal fluid (October 15, 1923). Paretic curves in gold-sol and colloidal gamboge reactions: globulin increase, pleocytosis 103.6 small and large lymphocytes per c.mm. Wassermann reaction positive.

Blood.—Wassermann reaction positive in a 1 in 15 dilution.

His remission, however, was of short duration, as in November he developed delusions of persecution and suffered from periodic lapses of forgetfulness. He became emotionally unstable and wept profusely without due reason. Permission was given for further fever treatment, and inoculation with benign tertian malaria took place on December 14, 1923.

CHARACTERS OF THE SPIROCHÆTE (*Spirochæte Duttoni*).

The organisms as seen in the blood with the dark field illumination were delicate filaments, which measured in length from two to six times the diameter of a red blood-corpuscle. The parasites exhibited regular curves varying in number with the length of the organisms. They were actively motile, and were seen moving rapidly across the field, showing undulating and corkscrew-like movements and disturbing the red cells in their course. Occasionally a spirochæte was observed to coil and uncoil itself rapidly by means of an actively moving extremity.

RELATIONSHIP OF SPIROCHÆTE TO THE FEVER.

On the evening of June 15, corresponding to the commencement of the fever, *Spirochæte Duttoni* were first seen in the blood. The organisms rapidly multiplied with the continuation of the illness, and as many as ten spirochætes were counted in one field on the 19th—the fourth day of the paroxysm. With the commencement of lysis the organisms rapidly disappeared and were absent from the blood till the 24th, when the relapse took place. The relapse lasted two days, and blood withdrawn during this period showed fewer organisms, although as many as nine were counted on the second day in a series of twenty fields. Repeated examinations of the blood

from June 26 onwards failed to demonstrate the presence of any form of spirochæte or granule, and so we assumed that a spontaneous cure of the fever had taken place.

I am unable to draw any definite conclusions from this form of fever therapy, as in this case, only a mild infection, characterized by one paroxysm and one relapse, took place with a spontaneous recovery. Since arm-to-arm inoculation with recurrent fever only fails in general paralytics, it is impossible to maintain the strain in this country.

I am extremely indebted to Dr. R. M. Clark, Medical Superintendent, for permission to publish this case.

The Effect of Malarial Fever upon Dementia Præcox Subjects.

By W. L. TEMPLETON, M.B., Ch.B.Glas., Bristol (late A.M.O., City of London Mental Hospital, near Dartford).

It has long been known that remissions of varying degree and duration may occur in chronic mental states as a result of acute febrile intercurrent disease, and many attempts have been made to produce such an acute febrile reaction by artificial means, with a view to improving the mental condition thereby.

The underlying rationale of this method of treatment is not yet known. It has been held that it is the accompanying leucocytosis which is of consequence, and in support of this theory it has been stated that rarely, if ever, has improvement followed upon diseases such as typhoid, in which there is frequently not a leucocytosis but a leucopænia (1). It is doubtful if this statement is strictly correct.

Kauffman has put forward the suggestion that the improvement obtained by virtue of intercurrent disease is due simply to a quickening of oxidations and the removal of the waste products of metabolism, but the acceptance even of this view still leaves unsolved the factors involved.

It has been suggested that some of the methods employed are but examples of non-specific protein therapy (2), but this claim is resisted by the exponents of the methods referred to (3).

Most of the methods employed fall into the following classification :
(i) chemical substances, *e.g.*, sodium nucleinate and allied substances,
(ii) toxalbumins, *e.g.*, tuberculin, staphylococci, typhoid bacilli, etc.,
(iii) acute disease, *e.g.*, malaria (4).

Within recent years the beneficial results of malarial infection in the treatment of general paralysis (5) has focussed attention upon this method of producing fever in chronic mental conditions.

The fact that the malaria treatment of general paralysis was being carried out in the institution at the time led to its being tested upon

the subjects of dementia præcox. It was considered that the empiricism which justified its use in general paralysis was quite as applicable to dementia præcox, particularly if one inclined to the toxæmic hypothesis of its ætiology. It was believed that even a negative result would be of value.

Under sodium nucleinate therapy many cases of dementia præcox are said to have recovered completely and others to have shown very decided improvement. It is to be noted that this method of treatment depends not on a rise of temperature (though this may be obtained), but apparently on the resulting neutrophile leucocytosis (6), which is the most prominent feature of the reaction.

Lundvall (7) in 18 cases obtained 4 recoveries and 9 improvements. Donath (8) of Budapest in 14 cases had 3 recoveries and 5 improvements. Schmidt (9) in 450 cases had a recovery-rate of 16·2 *per cent.*, and of recovery with defect 15·5 *per cent.*, *i.e.*, recovery in 31·7 *per cent.* Lepine (10) in 13 cases of dementia præcox had no success whatsoever, but in 13 cases of manic-depressive insanity obtained 8 cures and 2 improvements.

It is to be emphasized that in the case of malarial infection no leucocytosis, but a leucopænia is the rule. This has been confirmed in the cases noted.

In all 20 male cases were inoculated at intervals, and an average of 12 febrile reactions above 103° F. allowed, the actual number depending more or less upon the general condition of the patient.

As in the treatment of general paralysis patients were inoculated intravenously: 2–3 c.c. of blood were taken from the infected patient into a serum syringe previously lubricated with liquid paraffin to prevent clotting, and injected into the median basilic vein of the dementia præcox subject. After the first inoculation the infection was, of course, transferred from patient to patient.

It is to be noted that there was no cross-inoculation from syphilitic to dementia præcox patients.

The temperature rose as a rule the following day and ran a somewhat irregular course for a few days, when rigors commenced and the fever assumed its typical form. After a varying number of rigors—from six to eight usually—it was noted that daily rigors were the rule, due probably to the presence of two strains of parasites maturing at different times.

The fever was terminated by the administration of quinine sulphate gr. x for three doses, and gr. v daily for a week. In one case only did the malaria recur, and this was in a case to whom one dose only of gr. x was given as an experiment. His fever ceased for a week, when rigors recommenced, but vanished as rapidly under the routine dosage.

No untoward results were experienced during the course of the fever. Epistaxis occurred in a few cases; vomiting in two only (in one case the temperature rose to 107°), and herpes febrilis in quite a number of cases.

Recovery from the profound anæmia was in most cases rapid, and patients seemed physically much improved in every way.

Most of the cases showed some degree of mental improvement even during the course of the fever. In a few there was no change whatsoever, and this is more particularly true of three patients belonging to the paranoidal group, in whom there was not the slightest deviation from their own particular normal mental state prior to inoculation.

The most striking change was seen in a brightening of intellectual interest, a desire to converse, to read the newspapers and books, and in some a complete return to normal as far as could be judged. Many began to write letters home, and these revealed a wonderful transformation of interest. Some who had previously refused to interview their relatives welcomed them and discussed past events in a more or less rational way. In some the change was more definitely shown, as, *e.g.*, in a former bank clerk, an example of catatonic dementia præcox, whose powers of calculation prior to inoculation were *nil*; towards the end of the febrile illness he was able to demonstrate both accuracy and speed in this direction.

In some this improvement was preceded by a period of extreme irritability, but in no case was there any extreme excitement even in those accustomed to periodical maniacal outbursts.

As soon as their physical condition warranted it, most of those who showed definite improvement were sent out on working parties of various sorts, and performed their duties in a more or less satisfactory manner. The majority of the patients referred to had previously been quite unemployable in spite of repeated attempts.

Various schemes of occupational therapy for making use of these patients were contemplated, but lack of staff and facilities led to their abandonment. Even now it is considered that had an intensive scheme of manual occupational therapy been possible many of those patients might not have lapsed so quickly as they did. Investigation has shown that the type of individual who seems predisposed to develop dementia præcox is very often untrained in the use of his hands, and the faculties which are involved in the acquirement of manual skill are accordingly undeveloped, and it was thought that training along those lines seemed likely to give more permanent results than the usual occupations assigned to the inmates of most institutions.

In the absence of such training the failure to maintain the improve-

ment gained was not altogether surprising. At the end of two months there were few who had not materially lapsed, and it seems only a matter of time before all or most will have resumed their former mental state. A few who were previously subject to periodical attacks of excitement at fairly frequent intervals have remained free for a period of three months, and several others given to exhibitionism and filthy habits have remained remarkably well behaved for the same period.

In conclusion it must be confessed that the earlier results have but flattered to deceive, and it seems as if little or no permanent improvement can be expected from this line of treatment. One may be allowed, however, to argue that the fleeting results of this treatment in dementia præcox, as opposed to the seemingly permanent and progressive improvement obtained in general paralysis, may be regarded as indirect evidence against the parasitic nature of dementia præcox, and yet even here it must be considered how far the biological relationship between the *Plasmodium malariae* (a protozoon) and the *Spirochaete pallida* explains the very successful results obtained in the malarial treatment of general paralysis.

The temporary improvement obtained in dementia præcox is paralleled by a case of non-progressive general paralysis treated by the same method. This patient on admission in 1916 was a typical example of general paralysis with all the physical signs well marked, and in whom the Wassermann reaction of c.s.f. and blood was positive. Since admission this patient gradually quietened down, and is now garrulous, somewhat irritable, but not demented. Prior to inoculation with malaria the Wassermann reaction in both blood and cerebro-spinal fluid was found to be negative. Under this treatment he improved in very much the same way as the dementia præcox patients already described, became more agreeable, displayed a keener interest in affairs, interviewed his relatives amicably, but in contrast to the more active and recent cases of general paralysis he completely lapsed within a few weeks.

I am indebted to Dr. R. H. Steen for permission to report on the cases, and to Lieut.-Col. E. Goodall for most of the references.

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- (4) Pilcz.—*Lancet*, January 6, 1923.
- (5) Gerstman.—*Zeitschr. f. d. ges. Neurol. u. Psychiat.*, lxxiv, 1922 ; lxxxix, 1923.
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Medico-Legal Notes.

ABSTRACT OF THE REPORT OF THE LORD CHANCELLOR'S COMMITTEE ON INSANITY AND CRIME.

[Dated November 1, 1923.](¹)

THIS Committee was constituted in July, 1922, by the Lord Chancellor, The Earl of Birkenhead, "to consider and report upon what changes, if any, are desirable in the existing law, practice and procedure relating to criminal trials in which the plea of insanity as a defence is raised, and whether any and, if so, what changes should be made in the existing law and practice in respect of cases falling within the provisions of Section 2, sub-section (4) of the Criminal Lunatics Act, 1884."

The Committee consisted of the Right Honourable Lord Justice Atkin (Chairman), The Right Honourable Sir Ernest Pollock, *K.B.E.*, *K.C.*, *M.P.*, Sir Leslie Scott, *K.C.*, *M.P.*, Sir Herbert Stephen, Bart., Sir Richard Muir, Sir Archibald Bodkin, Sir Edward Troup, *K.C.B.*, *K.C.V.O.*, Sir Ernley Blackwell, *K.C.B.*, and Sir Edward Marshall Hall, *K.C.*

The reference in these terms naturally attracted the attention of the medical profession. Representative committees were established by The Council of the British Medical Association and by the Medico-Psychological Association, who submitted reports to this Committee and supported the reports by evidence. The report of the Council of the British Medical Association has also the authority of the Central Association for Mental Welfare, members of which body were associated with the Sub-Committee of the British Medical Association who dealt with this matter (*vide* April No., 1923, pp. 209-19).

Both Associations tendered evidence before us; we heard evidence of eminent professional men in support of the views of the respective Associations, including two members of the Board of Control, Dr. Bond and Mr. Trevor, who supported the report of the Medico-Psychological Association. We have thus had unequalled opportunities of becoming acquainted with the considered opinions of the

(¹) His Majesty's Stationery Office, price 6d.

most eminent representatives of the medical profession on this much debated subject. We desire to express our sense of deep obligation to the Associations generally and to their individual members for their valuable assistance in this respect.

Unfortunately for us the difficulties presented by criticism of the existing law from the medical side were not removed; for, as will be seen, the two reports are, on the main question, in direct opposition to one another.

The British Medical Association would retain the existing law with a modification as to lack of control: the Medico-Psychological Association would sweep away the present rules and substitute other questions for the jury which they formulate. **AFTER CAREFUL CONSIDERATION WE COME TO THE CONCLUSION THAT WE CANNOT ACCEPT THE RECOMMENDATION OF THE MEDICO-PSYCHOLOGICAL ASSOCIATION.** In substance we concur with the report of the British Medical Association. It seems right, however, that we should not pass away from a report presented to us with such great professional authority without stating some of the reasons for our conclusion.

The conclusions arrived at by the Medico-Psychological Association are:

I. The legal criteria of responsibility expressed in the rules in McNaghten's case should be abrogated, and the responsibility of a person should be left as a question of fact to be determined by the jury on the merits of the particular case.

II. In every trial in which the prisoner's mental condition is in issue the judge should direct the jury to answer the following questions:

- (a) Did the prisoner commit the act alleged?
- (b) If he did was he at the time insane?
- (c) If he was insane, has it nevertheless been proved to the satisfaction of the jury that his crime was unrelated to his mental disorder?

One of the difficulties that presented itself to us in the report of the Medico-Psychological Association is that the Association give no clue to what they regard as the test of criminal responsibility.

None of their witnesses had formulated in his mind, or at any rate expressed to us, what it was that ought to make a person of unsound mind immune from punishment for any act he might commit in violation of the criminal law. When pressed one or two of the witnesses would admit that under some circumstances a person of unsound mind might yet be criminally responsible. But the substance of their evidence was that insanity and irresponsibility were co-extensive. All the witnesses were, in substance, agreed that the effect of II (c), which threw upon the prosecution the onus of satisfying

the jury that the act of the person found to be insane was "unrelated" to his mental disorder, would be to cast a burden which could not be discharged; and that the question was otiose. The vagueness of the term "unrelated" was pointed out: and the phrase eventually was altered to "the mental disorder was not calculated to influence the commission of the act"; but the difficulty of proof is not altered by the turn of the phrase.

The far-reaching effect of granting immunity to every one who can be said to be of unsound mind is perceived when the medical conception of unsoundness of mind is considered. This will be found expressed, on the highest authority, at paragraph 3 (i) of the report. It is accepted by the witnesses for the British Medical Association, and, of course, by us. "Unsoundness of mind is no longer regarded as in essence a disorder of the intellectual or cognitive faculties. The modern view is that it is something much more profoundly related to the whole organism—a morbid change in the emotional and instinctive activities, with or without intellectual derangement. Long before a patient manifests delusions or other signs of obvious insanity he may suffer from purely subjective symptoms, which are now recognised to be no less valid and of no less importance in the clinical picture of what constitutes unsoundness of mind than the more palpable and manifest signs of the fully developed disorder which may take the form of delusions, mania, melancholia or dementia." An illustration of this was presented to us by Dr. Carswell:

"At the present moment I am dealing with the case of a young officer. I daresay it is confidential and at this Committee I daresay I can take the liberty of indicating to you the case of this young man. Long before he became insane he had symptoms which were puzzling and baffling. He never served in any active theatre of war. In 1919 he suffered from what was called 'general debility' and some weakness of the lungs was supposed, but no actual weakness was found. He was given three months' leave of absence. He was not well and returned, and he was then invalided home in July or August, 1919. Looking back on the history of the case, from the new medical standpoint, it is obvious that that was a beginning of the insanity which has now fully developed. All the symptoms he presented were symptoms of what was called debility, but they were really nervous, mental and emotional apathy so that he could not do the things that he was expected to do. Subsequently he was sent home, and this condition gradually developed into what was called neurasthenia—that is to say, he developed some more active indications. Ultimately he was demobilized, fully a year after his first symptoms. He is now in an asylum. In 1922 he was admitted to an asylum as a certified lunatic. He is now restless, excited, talkative and quite irrational in his ideas, and requiring constant control. We do not separate these conditions. This young man has suffered from one disease—a paranoid form of dementia."

In Dr. Carswell's view this young man was irresponsible for any crime committed at any time during that period.

In such a case as that mentioned there seems no reason to suppose that during the early stages at least the person concerned would not be affected by every motive for committing or abstaining from

committing a criminal act that would be likely to affect a person of sound mind and in substantially the same degree. The difficulty of diagnosis of the state of mind and, when some unsoundness of mind was indicated, of establishing the non-relation of the act to the unsound state of mind, would introduce so much uncertainty into the administration of the criminal law as to create a public danger.

It appears to us from the memorandum of the Association and from the evidence that much of the criticism directed from the medical side at the McNaghten rules is based upon a misapprehension. It appears to assume that the rules contain a definition of insanity, and the legal definition thus obtained is contrasted with the medical conception of insanity. "It implies a conception of unsoundness of mind that is obsolete." It may be that the judges who framed the rules took into consideration the medical view as to the nature of insanity generally accepted in 1843, if there was one. But it is certain that they were not professing to define "disease of the mind" but only to define what degree of disease of the mind negatives criminality: as much a question of law as the question at what age a child becomes criminally responsible, though only to be decided after considering the nature of unsoundness of mind from the physiological side. The report rightly says that "the law is only concerned to know whether the condition of the accused is a condition that negatives the existence of *mens rea*." One would therefore expect the legal test would be directed to the condition of "the intellectual or cognitive faculties" and yet that it is so directed is the main ground of the attack on the rules. When once it is appreciated that the question is a legal question, and that the present law is that a person of unsound mind may be criminally responsible, the criticism based upon a supposed clash between legal and medical conceptions of insanity disappears. It is not that the law has ignorantly invaded the realm of medicine; but that medicine, with perfectly correct motives, enters the realm of law.

If the existing legal position were always fully grasped we think that the complaint made in the report and supported by evidence, that a medical expert in giving evidence at a criminal trial is hampered in stating his conclusions as to insanity, would tend to disappear. There seems no reason why he should not fully develop his reasons for holding the prisoner to be of unsound mind. It is one of the conditions precedent to support the issue raised under the McNaghten rules. But having given evidence of such unsoundness of mind it is necessary that he should then be directed to the question of fact which determines the legal issue, *viz.*, the question formulated at present by the McNaghten rules. It may be that some judges, anxious not to lose time, bring the witness very early to the decisive

questions. We think that a wise discretion would allow all necessary expert evidence as to the general mental condition as a preliminary to evidence directly bearing on the ultimate legal issue raised by the plea.

IT WILL BE SEEN FROM WHAT WE HAVE ALREADY SAID, THAT, IN OUR OPINION, THE EXISTING RULE OF LAW IS SOUND ; THAT A PERSON MAY BE OF UNSOUND MIND AND YET BE CRIMINALLY RESPONSIBLE. A crime no doubt implies an act of conscious volition ; but if a person intends to do a criminal act, has the capacity to know what the act is, and to know the act is one he ought not to do, he commits a crime. Whether he should be punished for it is not necessarily the same question. We do not propose to discuss pœnological theories. We assume that two of the objects of punishment are to deter the offender and to deter others from repeating or committing the same offence. If the mental conditions we have presupposed exist, we think that punishment may be fairly inflicted. It is probable that the offender and others will be deterred. On the other hand, if the offender tends to escape punishment by reason of nicely balanced doubts upon a diagnosis of uncertain mental conditions, the observance of the law is gravely hindered. **WE ARE OF OPINION, THEREFORE, THAT THE PRESENT RULES OF THE LAW FOR DETERMINING CRIMINAL RESPONSIBILITY AS FORMULATED IN THE RULES IN MCNAGHTEN'S CASE ARE, IN SUBSTANCE, SOUND, AND WE DO NOT SUGGEST ANY ALTERATION IN THEM, THOUGH WE SUGGEST AN ADDITION TO WHICH WE WILL PRESENTLY REFER.** It is often forgotten that the rules as to criminal responsibility apply not only to cases of murder but to the vastly greater number of less serious offences. In these cases mental conditions can be, and are in practice, daily taken into account in awarding punishment or in deciding whether any punishment should be awarded. In the case of murder the Judge is not given a discretion as to punishment ; but the executive is vested with large powers of mitigating the legal sentence. These powers, as will appear later, we think it is essential to retain. **BUT WE SHOULD VIEW WITH ALARM ANY SUCH EXTENSIVE ALTERATION IN THE LEGAL PRINCIPLES OF CRIMINAL RESPONSIBILITY AS IS SUGGESTED BY THE MEDICO-PSYCHOLOGICAL ASSOCIATION.** The importance of the effect upon the trial of minor offences cannot be overstated. Insanity is admittedly incapable of definition ; its diagnosis difficult ; its effect upon conduct obscure. The proposed rules throw upon the prosecution the onus of establishing that the insanity said to exist was not calculated to influence the act complained of, and, in default of discharge of such onus, would compel the Court to order the accused to be detained during His Majesty's pleasure. **THE EFFECT MUST BE TO TRANSFER MANY INMATES OF PRISONS TO**

CRIMINAL LUNATIC ASYLUMS, AND TO BRING WITHIN THE PORTALS OF THE LATTER MANY PERSONS WHO ARE NOW, WITHOUT ANY PUBLIC DISADVANTAGE, PLACED IN THE CARE OF THEIR RELATIVES.

The interests of both the administration of justice and of the liberty of the subject require that so far-reaching a change should be adopted only on the ground of some imperative public necessity. We are content to say that we have no evidence of such.

The question which we have mentioned as not covered expressly by the McNaghten rules is the difficult question of loss of control caused by unsoundness of mind. The report of the British Medical Association, paragraph II (c), recommends that a person should be held to be irresponsible if prevented by mental disease "from controlling his own conduct unless the absence of control is the direct and immediate consequence of his own default."

The witnesses called in support of this recommendation did not propose that a weakening of control by mental disease should be sufficient. They mean control so impaired by disease as in substance to amount to complete loss of control. On the other hand, if such a loss of control exists, caused by mental disease, there seems no good reason for inserting the exception as to the direct consequence of his own default. The only case suggested to us which would come within the exception was intentional taking of drink or drugs as an incentive to the act, which would presumably in any case show that the loss of control was not caused by mental disease.

IT WAS ESTABLISHED TO OUR SATISFACTION THAT THERE ARE CASES OF MENTAL DISORDER WHERE THE IMPULSE TO DO A CRIMINAL ACT RECURS WITH INCREASING FORCE UNTIL IT IS, IN FACT, UNCONTROLLABLE. Thus cases of mothers who have been seized with the impulse to cut the throats of or otherwise destroy their children to whom they are normally devoted are not uncommon. In practice, in such cases the accused is found to be guilty but insane. **IN FACT, THE ACCUSED KNOWS THE NATURE OF THE ACT AND THAT IT IS WRONG; AND THE MCNAGHTEN FORMULA IS NOT LOGICALLY SUFFICIENT.** It may be that the true view is that under such circumstances the act, owing to mental disease, is not a voluntary act. We think that it would be right that such cases should be brought expressly within the law by decision or statute. We appreciate the difficulty of distinguishing some of such cases from cases where there is no mental disease, such as criminal acts of violence or sexual offences where the impulse at the time is actually not merely uncontrolled, but uncontrollable. The suggested rule, however, postulates mental disease; and **WE THINK THAT IT SHOULD BE MADE CLEAR THAT THE LAW DOES NOT RECOGNIZE IRRESPONSIBILITY ON THE GROUND OF INSANITY WHERE THE ACT WAS COMMITTED UNDER AN IMPULSE**

WHICH THE PRISONER WAS, BY MENTAL DISEASE, IN SUBSTANCE DEPRIVED OF ANY POWER TO RESIST.

We think that the question to be determined should be, not whether the accused could control his conduct generally, but could control it in reference to the particular act or acts charged. No doubt general lack of control would be relevant to the question whether the lack of control in the particular case was due to mental disorder or to a mere vicious propensity.

UNFITNESS TO PLEAD.

This issue can be raised upon arraignment by the prosecution or by the defence. It is essential to retain the procedure. We think that the standing orders of the Prison Commissioners recommending that the prisoner should be left to stand his trial unless there be strong reasons to the contrary represent the present practice and are satisfactory. If the issue of unfitness to plead is raised we think that it is desirable, unless in the very plainest cases, that the accused should not be found unfit to plead except upon the evidence of at least two doctors.

There must always be a discretion in the prosecution to raise the issue. We have evidence of cases of persons of unsound mind who are said to have pleaded guilty either in order to gratify an insane desire for punishment or to avoid an inquiry into their mental condition.

We do not think that a finding of unfitness to plead should be the subject of appeal. In practice we are informed that wherever a person found to be unfit to plead has been considered to have recovered sufficiently to be put on his trial he has, in all cases, been found to be guilty but insane.

EVIDENCE.

In the great majority of cases the most reliable medical evidence comes from the prison doctor, who alone has had the opportunities of continued observation that are so valuable in the diagnosis of mental disorder. It is of great importance that the medical officers of prisons should have special knowledge of mental disorder, and this is recognized by the Prison Commissioners. We may add that it is also of great importance that medical experts who give evidence in criminal cases should have some experience of the ways of criminals; and we have no doubt that the medical officers of some of our principal prisons speak with unrivalled authority on the question with which we are concerned. On the other hand, there are smaller prisons where the medical officers are part-time medical men, engaged in a general practice, who cannot be expected to have the special knowledge of the experienced whole-time officer.

The medical officer has power to ask the Home Office for permission to call in a consultant—a permission which should, and is in fact, freely given—but in our opinion it is not sufficient to rely upon the prison doctor never making a mistake in the exercise of this discretion. In some cases of doubt an accused person is transferred to a prison where expert observation can be obtained; but this may involve hardship to a prisoner, and, in some cases, indeed deprive him of reasonable opportunities of defence. We recommend that it should be open to either the accused or his legal representative or the prosecution or the committing magistrate to apply or cause application to be made to the Home Office for medical examination of the accused as to his state of mind by an expert medical adviser; and that, upon the request being granted, the examination should take place at the expense of the State unless the accused could reasonably bear it.

WE DO NOT RECOMMEND THE FORMATION OF A PANEL OF EXPERTS AS IS SUGGESTED BY BOTH MEDICAL ASSOCIATIONS. The panel would have to range over the whole of England and Wales; and we think that in some parts of the country there would be a difficulty in finding suitable members. In no case would it be possible to leave medical testimony to members of the panel, and thus prevent an accused person calling evidence of his own doctor or doctors not on the panel. The conflict of medical opinion could not by such means be prevented.

VERDICT.

The present form of verdict in cases where the accused is found to be insane is prescribed by the Trial of Lunatics Act, 1883, and is not altogether satisfactory. Before 1800, if an accused person was found to be insane so as to be irresponsible, he was acquitted, and no further order was made as to him.

By the Criminal Lunatics Act, 1800, Section 1, it was provided that if on the trial of any person charged with treason, murder or felony, evidence of insanity was given and the person was acquitted, the jury were to be required to find specially whether such person was insane at the time of the commission of the offence, and whether such person was acquitted by them on the ground of insanity, and if they so found, the person was ordered to be detained during His Majesty's pleasure. It may be noted that there was no express finding whether the accused had committed the act charged except in so far as that finding is implied in the statement that he was acquitted "on the ground of insanity," as no doubt it was meant to be.

This state of the law continued until 1883, when the law was altered by the existing statute, the Trial of Lunatics Act, 1883. Section 2

provides that "where in any indictment or information any act or omission is charged against a person as an offence, and it is given in evidence on the trial of such person that he was insane so as not to be responsible according to law for his actions at the time when the act was done or omission made, then, if it appears to the jury that he did the act or made the omission charged, but was insane as aforesaid at the time, the jury shall return a special verdict that the accused was guilty of the act or omission charged, but was insane as aforesaid at the time when he did the act or made the omission."

The consequence is that juries are frequently, for brevity, instructed to return, if the facts warrant it, a verdict of "guilty of the act but insane at the time," or even "guilty but insane." This seems to us illogical. The verdict is one of acquittal. An accused cannot be "guilty" of a physical act which is not in itself an offence. The word "guilty" in criminal trials should connote only criminality, the commission of a crime—the very thing which on the finding as to the accused's state of mind is negatived. We think that the Section should be altered so as to restore the logical principle that where insanity is such as to produce irresponsibility, the accused is entitled to a verdict of acquittal of crime. This might be secured by providing that the special verdict should be "That the accused did the act (or made the omission) charged, but is not guilty on the ground that he was insane so as not to be responsible according to law at the time."

Appeal.

The suggestion is made in the reports of both Medical Associations that there should be a right of appeal in cases where an accused person after trial has been found by the jury to be guilty of the act but insane so as not to be responsible according to law for his actions. We do not agree with this suggestion. So far as the issue of insanity is concerned, this is an exculpatory plea raised by the accused or on his behalf, and, on the hypothesis, has succeeded. We see no reason why the accused person should have the right to appeal from a decision in his favour which he must be taken to have invited. The only case in which there could be any reasonable ground of complaint would be where the issue was raised against the will of the prisoner, who was, in fact, sane, but unable to prevent the issue from being raised. In practice such cases do not occur.

SECTION 2 (4) OF THE CRIMINAL LUNATICS ACT, 1884.

The first statutory provision was made by the Insane Prisoners Act of 1840 (3 & 4 Vict., c. 54). Section 1 provides that when any prisoner, whether under sentence of death or otherwise, has been

certified by two justices and two medical men called in by them to be insane, *it shall be lawful* for the Home Secretary to direct his removal to an asylum; and when it has been certified to the Home Secretary that such prisoner has become of sound mind, the Home Secretary *is authorized* to remove such prisoner back to prison, or, if the period of his imprisonment shall have expired, to direct that he be discharged.

No distinction is made here between prisoners under sentence of imprisonment, etc., and prisoners under sentence of death, but there is no provision that a prisoner certified while under sentence of death may, if he becomes of sound mind, be removed to prison to undergo his death sentence.

The Insane Prisoners (Amendment) Act of 1864 (27 & 28 Vict. c. 29), Section 2, practically re-enacts Section 1 of the Act of 1840 as regards prisoners not under sentence of death. The Secretary of State *may*, on receipt of certificate, *if he thinks fit, remove*, etc. As regards prisoners under sentence of death, however, it provides that if it shall be made to appear to the Home Secretary that there is good reason to believe that a prisoner under sentence of death is then insane, either by certificate of two justices "or by any other means whatever," the Home Secretary *shall* appoint two or more medical men to inquire as to the insanity of such prisoner, and if these medical men certify in writing that they find the prisoner to be then insane, the Home Secretary *shall* direct that such prisoner be removed to an asylum.

Two points may be noted. The inquiry is into the present condition of the prisoner, not as to his condition at the time when the crime was committed. Secondly, the Home Secretary, on receipt of such last certificate, has no discretion—he "shall direct" removal to an asylum.

Then as regards both classes of prisoners, it is provided that they shall remain in confinement in an asylum until it shall be duly certified to the Home Secretary by two medical men that such person is sane, and thereupon the Home Secretary *is authorized* to direct, if the period of imprisonment shall have expired, that the person be discharged, or, if such person still remain subject to be continued in custody, that he be removed to any prison to undergo his sentence of death or other sentence as if no warrant for his removal to a lunatic asylum had been issued.

The Act of 1864, which had repealed Section 1 of the Act of 1840, was in turn repealed by the Criminal Lunatics Act, 1884.

The Act of 1884 retains the distinction as to inquiry into insanity in this respect. As regards prisoners under sentence of death it substantially repeats the provisions of the Act of 1864, but as regards both classes of prisoners it confers again on the Home Secretary a

discretion as to remitting to an asylum. As the power conferred on the Home Secretary is given in the one sub-section dealing with prisoners of both classes, it seems inevitable that it should be given in the form of a discretion.

But in substance there is, in practice, little difference between the two statutes so far as the power of the Home Secretary is concerned in cases of prisoners under sentence of death.

There is authority of some weight from the time of Lord Coke for considering that apart from statutory provisions it was contrary to common law to execute an insane criminal. [Quotation.]

Probably these authorities have influenced the practice of successive Home Secretaries, **BUT SINCE THE ACT OF 1840 WE HAVE INDISPUTABLE AUTHORITY FOR SAYING THAT NO PRISONER UNDER SENTENCE OF DEATH HAS EVER BEEN EXECUTED AS TO WHOM A CERTIFICATE OF INSANITY HAS BEEN GIVEN UNDER THE STATUTE FOR THE TIME BEING IN FORCE.**

The first question that arises is, Should the power of the Home Secretary to remit to asylums prisoners reasonably certified to be insane exist? We have no doubt at all that it should. In the case of prisoners not under sentence of death the necessity of such a power has never been controverted. In the vast majority of cases the sanity of the prisoner has never been in issue. **AFTER CONVICTION INSANITY MAY DEVELOP IN ITS MOST EXTREME FORM; AND WE CANNOT IMAGINE A CIVILISED COMMUNITY IN WHICH IT COULD BE CONSIDERED NECESSARY OR DESIRABLE TO KEEP SUCH A PERSON CONFINED AMONG ORDINARY PRISONERS SUBJECT TO THE COMMON DISCIPLINE PRESCRIBED FOR PRISONERS OF NORMAL MIND, AND DEPRIVED OF ANY TREATMENT FOR THE ALLEVIATION OF HIS MENTAL DISORDER. THERE CAN BE NO REAL DISTINCTION IN CASES OF PRISONERS UNDER SENTENCE OF DEATH.**

The question for the Home Secretary is not simply the legal question, "Was the prisoner responsible for his act?" though it may be his duty to review that finding; under the statute the question is a medical question, "What is the prisoner's present state of mind?" In investigating that question the medical men must necessarily consider the circumstances of the crime for which the prisoner has been convicted.

It is proper that the official instructions given to the medical men appointed under Section 2 (4) should direct them, as it does, to investigate his mental condition both now and as far as possible at the time of the murder. In practice, therefore, the report after a statutory inquiry, wherever it is possible, deals with both periods of time. **BUT WE WISH TO EMPHASISE THAT THE STATUTORY INQUIRY IS INTENDED TO INVESTIGATE THE PRISONER'S SANITY OR INSANITY, i.e.,**

HIS CONDITION FROM A MEDICAL POINT OF VIEW ; AND IT IS OUR OPINION THAT THIS INQUIRY SHOULD STILL BE HELD UNDER THE SUBSECTION, AND WE HAVE NO CHANGE IN THE PROCEDURE TO RECOMMEND. No doubt in some cases the investigation and the exercise of the discretion involve a review and a reversal of the express finding of the jury. So far from this being objectionable we think it essential that it should form part of the duty of the Home Secretary, just as it is in exercising the prerogative of mercy, to which this power is closely akin.

We have only to add that in our opinion it is right that the power of acting upon the certificate of insanity conferred upon the Home Secretary should be in terms discretionary. Facts may become known after the inquiry or the inquiry itself may for various reasons be found to be unsatisfactory so as to entitle the Home Secretary to allow the law to take its course notwithstanding the certificate.

But if no such circumstances exist, we think that the present practice of exercising the discretion in only one way, *i.e.*, remitting the prisoner to an asylum, is right and should be continued. We should be not less humane than our forefathers. It may be that the degree of insanity contemplated by the exponents of the common law whom we have quoted was greater than that which would be covered in these days by a certificate of insanity under the subsection. But many of the reasons given for the merciful view of the common law continue to have force even under modern conditions. **EVERY-ONE WOULD REVOLT FROM DRAGGING A GIBBERING MANIAC TO THE GALLOWS.** We are not prepared to draw a line short of the certificate of insanity given after inquiry by reasonable and experienced medical men.

FINAL REMARKS.

Finally, we are glad to be able to report that the present system has been proved to work satisfactorily, vindicating the law with firmness and humanity.

In 1896 a Committee of the Medico-Psychological Association appointed to consider the matter before us stated in their Report that the questions they had considered were " (First) Whether to insane offenders justice is done ? (Second) If it be not, whether this failure of justice is due to the state of the law ? "

In the course of their Report the Committee say : " So far from finding, as has been alleged, that difficulties are placed in the way of proving the insanity of an offender ; that judges are prejudiced against the plea of insanity, and conduct trials in such a manner as to nullify that plea ; that the law is such as to bear hardly upon the insane offender, even when the judge is willing to bring him within

its exonerating provisions ; that medical experts are silenced by the rules of evidence and prevented from stating their real opinions of the prisoner ; so far from discovering this state of affairs to exist, your Committee have to report that, from the beginning to the end of the proceedings, care is taken that justice should be done, and that the interests of the prisoner should not suffer through the poverty, stupidity, or ignorance of himself or of his relatives." We have no doubt that this passage, true in 1896, is also true to-day.

The Committee reported that under the circumstances disclosed by their investigations they were unable to make any recommendations for the amendment of the law ; and this was adopted by the Association with the addition of the words, " while not approving the doctrine and definitions contained in the judges' answer to the House of Lords in 1843." (The McNaghten Rules.)

We have no instance brought before us by any witness personally acquainted with the facts of any case in which a miscarriage of justice took place in the execution of an offender. Two or three cases were suggested tentatively, and on investigation proved, in our opinion, unfounded. All of us have personal experience of the methods of the Home Office advising upon the exercise of the prerogative of mercy and in administering the provisions of the Criminal Lunatics Act. We are not influenced by the presence of our two colleagues from the Home Office in saying that its duties are performed with a scrupulous care and single-minded devotion equally to the maintenance of the law and the legitimate protection of the prisoner. The public may be assured that no considerations have at any time any weight that are not directed to these two topics ; and that the Secretary of State has never had more conscientious and careful advisers than those who at present, or for some years past, have had to undertake that thankless and most responsible task. In our opinion, in 1923, as in 1896, " to the insane person justice is done."

SUMMARY.

We recommend that :

1. It should be recognized that a person charged criminally with an offence is irresponsible for his act when the act is committed under an impulse which the prisoner was by mental disease in substance deprived of any power to resist. It may require legislation to bring this rule into effect.
2. Save as above, the rules in McNaghten's case should be maintained.
3. Where a person is found to be irresponsible on the ground of insanity, the verdict should be " That the accused did the act (or made the omission) charged, but is not guilty on the ground that he was

insane, so as not to be responsible, according to law, at the time." The existing statutory provision in this respect should be amended.

4. Until such amendment, the verdict should always be taken and entered as guilty of the act charged, but insane so as not to be responsible, according to law, for his actions at the time.

5. Accused persons should not be found on arraignment unfit to plead except on the evidence of at least two doctors, save in very clear cases.

6. The present law as to appeal should not be altered, *i.e.*, there should be no appeal on the finding of insanity either on arraignment or after trial and, in the latter case, either as to the act or omission charged or as to insanity.

7. Provision should be made, under departmental regulations, for examination of an accused person by an expert medical adviser at the request of the prosecution, the defence, or the committing magistrate.

8. Provision for a panel or panels of mental experts is unnecessary. As to the Criminal Lunatics Act, 1884—

9. It is essential that the statutory power under Section 2 (4) should be maintained.

10. The procedure under the sub-section is satisfactory and does not require amendment.

11. The discretion of the Secretary of State should be exercised as at present.

We desire gratefully to acknowledge the valuable services of our Honorary Secretary, Mr. R. E. Ross, the Principal Clerk of the Court of Criminal Appeal. He has worked for the Committee gratuitously, and has spared no effort to make our labours easier. His profound knowledge of criminal law and procedure and his administrative experience have been of the greatest assistance.

[Black capitals are ours.—Eds.]

REX v. CUTHBERT CHARLES CRACROFT RICE.

This case was tried at the Central Criminal Court on November 20 before Judge Atherley-Jones. The defendant was charged with unlawfully attempting to forge a copy of the *London Gazette*. He had served as a lieutenant during the war, and on leaving the Army went to Cambridge University. He was convicted of theft in 1922. And he appears to have conceived the idea, partly in connection with this conviction, of forging a copy of an official publication, in order to bestow upon himself titles and awards of which he was not possessed. It was suggested that his object was to deceive his father and mother as to his military position.

There was evidence that the defendant had been sent away from a public school, under suspicion of having won a prize by unfair means. At that time the opinion had been expressed that he was a "moral defective." Later he went to another school, at which he did very well.

Dr. Henry Head did not think the defendant was insane, but regarded him as a "person of feeble will and doubting purpose." He considered him to be a proper case for medical care. Dr. Norwood East, of Brixton Prison, gave similar evidence.

The judge accepted the view that the case was one of mental deficiency, although not certifiable under the Mental Deficiency Act, there being no proof of the existence of the defect "from an early age." He commented on the need for the amendment of the law in this direction—a view which is becoming increasingly held. He also adopted the position that the case was one for treatment, and not for punishment. And he bound the defendant over in recognizances, in order that he might enter Camberwell House, presumably as a voluntary boarder.

The judge's attitude is an illustration of the more reasonable spirit which is entering—it may be slowly—into legal practice. Cases of uncertifiable mental defect, as also cases of mental conflict, require treatment and not punishment. We welcome the signs that this fact, which some of us have been preaching for years, is becoming recognized. But there is one point which must be seriously considered. This particular case could be dealt with on rational lines, because the defendant's relations were able to pay the expenses of his residence in a private institution. What is to be done with cases in which financial resources are limited or absent? In this connection the possibility is a very real one of the charge being made that we have "one law for the rich and another for the poor." Surely the true remedy is the provision of State institutions for the treatment of these cases.

We have received a copy of a most important Act, which appears to have been passed last year by the legislative authority of the Commonwealth of Massachusetts, U.S.A. It provides that every person who is indicted for a capital offence, or who, being indicted of any offence, is found to have been previously indicted more than once, or to have been previously convicted of a felony, shall be examined by the department of mental diseases, with "a view to determine his mental condition and the existence of any mental disease or defect which would affect his criminal responsibility." The report of this investigation is admissible as evidence of the mental condition of the accused. We should be glad to learn further

details as to where, and by whom, this examination is made, and also as to what extent the courts act upon the findings of the examination. But the enactment marks a great advance in criminology. It is particularly to be noted that the principle of examination before trial is recognized. Such is the logical method. And it is also the most fruitful time for investigation. The situation is largely altered when conviction has taken place. Very varied mental abnormalities would be discovered by this investigation. And the next step would be the legal recognition of these abnormalities, and the provision of institutions for their proper treatment. A similar alteration in our legal practice is wanted in this country. Combined with the investigation now being carried out into the mentality of lads and girls sentenced to Borstal treatment, and with the examination of other offenders which is now made in some of our districts, it would go far to realize the hopes of enlightened criminologists.

Dr. L. Vernon Briggs, of Boston, U.S.A., sends us a most interesting pamphlet entitled *Defective Delinquents in the Army of Occupation of the American Forces in Germany*. The American Army, on their entrance into the war, had a psychological examination made of their recruits. There were a considerable proportion of men of subnormal intelligence, whose mental defect was not sufficiently great to occasion their rejection for the army. These men proved, as was to be expected, a great source of trouble in Europe. They were constantly committing offences. The punishment awarded for these offences at first consisted of old-fashioned "penal discipline," every possible means being taken to degrade the men subjected to it. Returned to their units, they were shunned and ridiculed by their fellow soldiers. We are not surprised to learn that the commission of fresh offences was the result. Things were completely altered when a new system was introduced. Under this, every means was employed to restore the offender's self-respect. The result of this system was that the men, when returned to their units, often became the best soldiers therein, and less than 3 *per cent.* committed fresh offences.

With this as his text, Dr. Vernon Briggs preaches an excellent sermon on the subject of the general treatment of offenders. He holds that "the defective delinquent should be handled in an entirely different manner from the normal offender." Waiving the academical question as to whether there is such a person as a "normal" offender, all who have practical knowledge of criminals will recognize the type which Dr. Vernon Briggs describes. He points out that repressive penal discipline is more damaging (if that be possible) to these persons than to the average man or woman. Such treatment always calls out the worst qualities of those subjected to it. The defective

delinquent requires scientific study, and classification "in groups of from one upwards," as Dr. Vernon Briggs well says. And he also claims that there is not one of these defectives who has not "something in him which will respond to the right care and treatment." And these remarks do not apply to the defective delinquent only, but to every offender. Careful study, and then individual treatment, is the only principle worth considering in penology. But this point requires to be constantly stressed. For apart from those who still adhere to the old "bread of affliction and water of affliction" penal theory, there are those who insist that in some particular form of institution lies the certain and universal way of dealing successfully with offenders.

Dr. Vernon Briggs also sends us a pamphlet on the *Organization and Conduct of the Problem of the Mentally Ill in Massachusetts*. It was published in 1917, so it is a little late in the day for a notice of it. He describes a reorganization of the psychiatric service of his State. The "Commission of Mental Diseases" consists of a paid director, who is responsible to the Governor, with four "associate members." The practical result appears to be a "one-man" system of power. Such an arrangement will have good and bad features, the preponderance of one or the other depending on the man. But the outcome here seems to have been a much more marked uniformity in the controlled institutions (sixteen in number). We note with much interest the establishment of district out-patient clinics in thirty-one places in the State. A unified pathological service was also set up. There appears to be an excellent system of classification of patients among the various institutions. But there is no "place for hopeless cases, no place where patients might not look for benefit." Some local administration is still preserved, in that each institution has seven unpaid "trustees," whose powers extend to the appointment and removal of the superintendent. Dr. Vernon Briggs wisely says that far more depends upon *personnel* than upon organization; "no mere organization can safeguard us against inefficiency."

Occasional Notes.

Dorset County Hospital Mental Clinic.

THE establishment of an out-patient clinic for early mental and allied disorders at Dorchester in October, 1922, was an event of some importance in the progress of psychiatric treatment in this country. The step had some years ago been taken in the Metropolis

and in some of the big towns, but this was the first to be created at a county hospital in a rural district. Dr. G. E. Peachell, Medical Superintendent of the Dorset County Mental Hospital, in a paper read at the meeting of the South-Western Division on October 25, 1923, relates how it came about, and gave an interesting account of the first year's working.

Dorset is a very rural county and its county hospital at Dorchester is naturally not large—50 beds—but it is well equipped, and at the present moment the wards are being entirely modernized. Entrance both for in-patients and out-patients is by subscribers' tickets, the latter for three attendances needing one ticket, the cost of which is one guinea.

Before the Clinic could be established it was necessary—

(i) To secure co-operation between the Committee of Management of the County Hospital and the Visiting Committee of the Mental Hospital. This was readily obtained.

(ii) To provide for *free admission* to the Clinic, and also to see that the patients paid towards the cost according to their ability, and that there was no abuse of it—the patients being of appropriate social status.

(iii) To pay the Hospital a fixed sum for the use of a room and the advantage of a specialist's services, *e.g.*, radiologist, dentist, so that no loss accrued to the Hospital.

Dr. Peachell therefore approached the Boards of Guardians of the twelve unions in the county, and asked for support to the extent of £5 per annum from the smaller unions, and for the two large unions, £10. All except one contributed, thus making a pool of £65 to administer the Clinic. By obtaining the co-operation of the Boards of Guardians, needful financial support, interest in the movement and patients were all gained.

The following financial arrangements were made, which have proved very satisfactory : The Hospital is paid £1 a week for accommodation and to cover the cost of free out-patient tickets. In addition it has half the fees taken at the Clinic for drugs, etc., special drugs being found by the Dorset County Mental Hospital, which also supplies the requisite mental nurse. All correspondence is done and the accounts kept at the mental hospital, this account being quite separate to the maintenance account. The maximum fee is 3s. 6d. an attendance, but the charge made grades down from this to free treatment. Electrical, dental or X-ray treatment, if charged for, is extra. The fees taken have amounted to £12 2s. 3d. in the year.

The Clinic was established on broad lines, to include both psychiatric and neurological cases, which is a sound policy. Psychiatry

and neurology are allied subjects, and as the practice of either constantly involves a knowledge of the other, their association in one clinic is an immense advantage in the treatment of the patients.

The Clinic is open on one day a week—Saturdays from 12 to 2 p.m. Admission is by an out-patient ticket, which may be obtained from a medical practitioner practising in Dorset, any member of a contributing Board of Guardians, or of the Visiting Committee of the Mental Hospital or of the Dorset County Hospital, and from the medical staff at the Clinic.

A summary of the first year's workings shows that 40 new patients were treated on a total of 206 occasions. They were cases of neurasthenia and anxiety neuroses (9), epilepsy (7), melancholia (7), delusional insanity (4) for the most part, together with a few cases of mania, hysteria, confusional insanity, general paralysis, cephalalgia, cerebral tumour, etc. Two cases of high-grade imbecility were sent for diagnosis, and one case was sent by the magistrates for an opinion as to insanity. Of these 40 cases, 10 recovered, 15 were relieved, and 14 not improved or remaining under treatment, which included 7 who had to be admitted to the County Mental Hospital, of which 3 have since been discharged recovered, and 2 are convalescing.

In appraising the work done during this period it must be remembered that Dorset has a comparatively small population, that the means of transit are not good, and the fact that it was the first year of working. Under these circumstances it must be conceded that the results are both encouraging and satisfactory, and Dr. Peachell and those associated with him are to be congratulated on the double fact of first founding the Clinic and then demonstrating its possibilities and usefulness.

The Training of Nurses and Reciprocity between Mental and General Hospitals.

As far back as 1889, even prior to the issue of the Report of the Brudenell Carter Committee, the late Dr. H. Hayes Newington in his Presidential Address urged the necessity for a closer union between the general hospital and its staff and the asylum and its staff. Referring to the nursing staff of his ideal mental hospitals he said, "The attendants and nurses should be chosen from two sources—a few skilled ones from the outside for the cases demanding more especially the nursing of a general hospital, and the remainder being taken from the staff of the asylum itself." (1)

He advocated the establishment of two types of hospitals for the treatment of recent cases of mental disorder which were to be additional to the county asylum :—one, a small county mental hospital

devoted mainly to the treatment of patients, the other more of an educational centre for the teaching of psychiatry and research.

The progress made in the care of the insane has not been exactly on the lines laid down 35 years ago by Hayes Newington, but the ideals that animated him, and which lay near to his heart, are slowly but surely materializing.

It is not a special county hospital we now aim for as the ideal mental hospital, but rather that the county asylum itself should become the ideal mental hospital, and the educational mental hospital he advocated has come to pass in the form of the modern psychiatric clinic which combines the functions of both the teaching and actual practice of clinical psychiatry as at the Maudsley Hospital, and for many years at Bethlem.

Our ideals regarding the training of the nursing staff of the mental hospital have undergone further evolution since that red-letter day when our Association adopted a scheme for the training of nurses, and established the certificate of proficiency in mental nursing. That was in July, 1890, and it should never be forgotten that Hayes Newington was the Chairman of the Committee which worked out the scheme.

There were already certificates for mental nursing in existence, chiefly in Scotland, and in the 'eighties systematic training of nurses was being carried out at the City of London Asylum, Stone. The Association, however, set the example, which has been copied since, of there being one portal of entry into the nursing profession.

Thus the seeds for a still further progress in the staffing of mental hospitals were sown when Hayes Newington laid down the staffing of his ideal mental hospitals in 1889. The services of general hospital trained nurses were to be called to the mental hospitals—an event which actually happened, in 1891, when Dr. Wigglesworth introduced them into the wards at Rainhill.

About this time the strong advocate for employing general hospital trained nurses in mental work was Prof. George M. Robertson. He carried his ideas into practice, in 1896, at Murthly Asylum. It was he who over 20 years ago failed to carry the Association with him in his proposal to relieve the general hospital nurse of one of the three years' training for the Association's nursing certificate, and it was not until ten years later that, on the motion of Dr. C. A. Mercier, it was carried.

Our Association has endeavoured always to maintain a high level of training of candidates for its mental nursing certificate, and to establish a standing for the latter equal to that granted to general hospital trained nurses. In furtherance of this the Association agreed, in July, 1919, to Prof. Robertson's proposal that the three

years' course of training prescribed by the Association should be taken in one mental hospital, instead of "not more than two mental hospitals."

At the annual meeting held at Buxton, in July, 1920, the training of the general hospital nurse in mental work was again discussed, and the recommendation of the Education Committee that the general hospital nurse should only be required to take one and not two years' training at a recognized institution, after much discussion, was rejected. There was, however, a general feeling that there should be reciprocity between the general hospitals and the mental hospitals in this matter. Lieut.-Col. J. Keay boldly said, "He would not do anything to assist general hospital nurses obtaining the Association's certificate at a cheaper rate, or give facilities which the mental nurse did not enjoy when she sought the general nursing certificate." The need for reciprocity was expressed in another sense by Dr. C. H. Cole, who said, "Medical officers engaged in dealing with mental diseases had been apart from physical disease practitioners so long that they should now try and come together. This was an opportunity to do so by means of the nurses."

A further evolution in this direction, and the most important step of all, was the decision of the General Nursing Council (England and Wales) that registered mental nurses should be required to do only a two years' course of training in general nursing for admission to the General Register.

The ideal that has been slowly but surely gaining ground is that a proportion, if not all of the mental nurses employed in mental hospitals should be doubly trained. As an evidence of this, the Mental Hospitals Committee of the London County Council in November, 1921, addressed a letter to the General Nursing Council, desiring them to facilitate the general hospital training of mental nurses.⁽²⁾

The latest development in reciprocity between general and mental hospitals is one which stands to the credit of Dr. T. S. Good, Medical Superintendent of the Littlemore Hospital, Oxford. It is a fitting corollary to the creation of the Oxford Clinic, itself a practical evidence of the value of reciprocity.

Through the courtesy of Dr. Good we are able to publish the scheme for the interchange of nurses for training purposes between Littlemore Hospital and the Radcliffe Hospital, Oxford, which is as far as we know the first of its kind to be put into practical operation.

I. For the purpose of improving the training of nurses it should be allowed by the Committee of Visitors that any nurse, after one year of training at her respective hospital, shall be able to be transferred for a period of four months from (1) Littlemore Hospital to the Radcliffe or any other recognized training hospital, to be trained

in general nursing. (2) The Radcliffe or any other recognized training hospital to the Littlemore Hospital to be trained in mental nursing, under the following conditions :

(a) That each nurse shall remain on the books of her own hospital and be paid by that hospital at the current wage of her own hospital. This regulation would obviate any alteration in the financial conditions at the two institutions, and also make no financial difference to either hospital. (b) A nurse under training at either hospital shall, for the time being, be under the regulations of the hospital at which she is training, and that hospital shall have the right of returning her to the hospital to which she is permanently attached in the event of her not proving satisfactory in her conduct while under training. (c) That the number of nurses from either hospital under training shall be equal.

II. A nurse who has either taken her certificate in general nursing, or who has taken her certificate in mental nursing, can be interchanged between the two hospitals for a period of four months for special training in either branch.

III. Any nurse who is fully trained in either branch shall be able to be interchanged to obtain her further certificate either in general nursing or mental nursing in the same manner, it being distinctly understood that in every instance there must be an equal number of nurses interchanged.

In due course no doubt we shall hear from Dr. Good the practical result of this departure, which in the meantime will be awaited with considerable interest.

(¹) *Journal of Mental Science*, 1889, p. 308.—(²) Meeting of the General Nursing Council (England and Wales), May 18, 1923: Report of the Mental Nursing Committee: "It will be remembered that a letter was presented to the Council by Mr. Keene, of the London County Council, pointing out the desire on the part of the London County Council that mental nurses should obtain general training, and Rule 12 (A) (7) was passed by the Council, and is now before the Minister of Health, to give effect to this desire that mental nurses should be doubly qualified. In order to facilitate this end, which means so much to mental nursing generally, the Committee submitted the following resolution: 'That the Council urge on the governing authorities of general hospitals the importance of facilities being given to registered mental nurses for obtaining the two years' course of training in general nursing required for admission to the General Register.'"

Part II.—Reviews.

Report of the Commissioners of Prisons for the Year ended March 31, 1923. H.M. Stationery Office. Pp. 95. Price 2s. net.

This report shows an increase of 3,910 in the number of receptions under sentence, as compared with the figures for the previous year. Almost the whole of this increase is due to the debtor class. Many

of these men were sent to prison for failure to pay arrears due under maintenance and bastardy orders. Some of these failures were due to real misfortune. But many were cases of men who wilfully refused to fulfil their obligations. The hasty marriages contracted during the war, and the relaxation in sexual relations at that time, are now bearing their inevitable fruit. The total number of receptions, however, shows a very marked decrease over the figures for pre-war years. The Commissioners draw attention to the appalling fact that 25 *per cent.* of all sentences were for 14 days or less.

We learn that 134 persons were certified as insane during their sentences, 227 were found to be insane on remand, and 55 found insane at their trial. There were 71 persons certified as mentally defective during sentence, and 165 so certified on remand. In addition to these, 1,842 persons were remanded for report as to their mental condition. These figures represent a very large amount of work done by the medical officers. But the number of cases specially remanded for this purpose is not as large as it should really be. Moreover four prisons dealt with 74 *per cent.* of the cases. The establishment of remand homes, apart from the prisons, is urged. Provided care were taken to staff these institutions properly, this would be an excellent plan.

With regard to the mentally defective, the urgent need for the provision of additional institutions is pointed out, and it is made clear that a local authority has no power to review medical certificates given under Sect. 9 of the Mental Deficiency Act.

It is pointed out, not for the first time, that there are mental abnormalities, other than certifiable insanity and mental defect, which are frequently found among offenders. The Commissioners realize that the law will have to take cognizance of the existence of these mental states, and will have to provide accommodation for them. At the present time courts often have no alternative to prison. The presence of persons suffering from these mental abnormalities in prison is not only harmful to themselves, but is a great bar to sound schemes of prison reform.

The Commissioners have adopted the principle that the object of imprisonment should be the promotion of self-respect and a sense of personal responsibility. As they most justly remark, "each kind of treatment tends to produce the state of mind it anticipates." An excellent educational scheme has been instituted, under eminent voluntary local advisers.

But the treatment of a prisoner, as of any other person, is an individual problem, and nothing can be done to solve it without careful individual investigation. It is in this direction that the hope of the future lies. We note the establishment of a "reception class" at Wandsworth, at which all lads sentenced to Borstal treatment receive a thorough psychological examination. The exhausting nature of this work, to the examiners, is pointed out. This point requires to be constantly stressed, for there are some who appear to think that all necessary information can be obtained by a short examination conducted by a part-time medical officer.

The extracts from the reports of the Medical Officers of the Prisons

offer a mass of evidence on this subject, and form the most interesting feature of the Report. The most illuminating is the lengthy extract from the Report of the Medical Officer of the Birmingham Prison, to which 204 cases (153 men and 51 women) were sent during the year for special examination and report. He writes—"At the risk of an accusation of constant repetition, I must again refer to the necessity of examination of cases. Every case is, of course, a separate problem, and as such deserves full investigation. Merely to name the offence which a man has committed tells us very little. It gives us no information as to the cause of the offence, nor does it characterize the offender, nor does it indicate the appropriate treatment for him. . . . Each offender demands individual consideration, and without this consideration treatment can only be administered blindly." He again insists upon the importance of mental conflict as a cause of delinquency, and upon the necessity of a careful and prolonged investigation into those cases where such a mental condition may reasonably be suspected. But individual treatment is a necessary corollary to ascertainment. "The treatment of an offender who suffers from any severe physical ailment is already most materially modified. It is not thought necessary that all persons guilty of any particular form of offence should undergo precisely similar prison treatment, without regard to sex, age or physical condition. We have definitely adopted, as our standard, the position that an offender should, if possible, not be damaged physically by his punishment. Surely the same principle applies to the mental side of the offender. But there can be little doubt that many persons suffering from these mental conflicts are liable to be damaged still further, psychically, by imprisonment without full and proper treatment."

At Brixton Prison the Medical Officer states that 725 were remanded for report as to their mental condition. Of this number 117 were found to be insane, 67 as certifiable under the Mental Deficiency Act, 54 as psychopathic, and 58 as mentally enfeebled. These figures give 3·8 *per cent.* of prisoners as mentally abnormal. "The number of psychopathic and border-line cases which are not certifiable as insane or mentally deficient is therefore considerable, and if sentenced, cannot find a suitable environment in a convicted prison, and the best method of dealing with them presents a problem of considerable difficulty."

Some of these mentally enfeebled may be, as is shown by the Medical Officer of Holloway, senile debilitated women who are totally unfitted for employment, and on release have only the alternative of the workhouse or a return to prison. He suggests that these should be boarded out in some home under supervision under a suitable medical certificate. One interesting observation is made by the Governor of Aylesbury Borstal Institution concerning the "smashing up" of furniture by unruly inmates, so well known to mental hospital superintendents, as evidence of the importance of a proper understanding of the mental attitude of the individuals concerned. "The destruction to the property in the inmate's room is very complete, and the noise during one of these escapades is worse than anything I have ever heard in a mental hospital. The only way to counter

this phase of life at Aylesbury is to provide more outlet for the pent-up emotions of these girls. Punishment alone will not suffice."

It is encouraging to note that the Commissioners of Prisons are alive to the outstanding importance of this aspect of the delinquency problem. They write that "medical opinion is agreed that, besides the two certifiable categories, there exists a third class of prisoners of abnormal mentality for whom no legal provision is at present made. Their leading characteristics are mental retardation, or mental instability, or both, the unstable ones being liable to outbursts of hysterical temper and destructiveness, while both classes are incapable of profiting by training and discipline. We draw attention to the necessity for a special form of curative treatment under a specially trained staff, in an environment other than that of a prison."

Medical inspection of all children in elementary schools has been now carried out for the past sixteen years; in addition the provision of opportunities for the ascertainment of actual mental defect. This should be a great aid as a preliminary sifting of those who show neuropathic or psychopathic tendencies. It is not likely that the actual records of the great mass of children who do not during their school life show any departure from normal will be of any assistance in the later years of adolescence. The number of individual schedules is too large, and the difficulty of indexing is too great to be of any actual value in individual cases. Much more is to be expected from the foundation of psychological clinics, linked up with the school medical service, and the children's courts, for "the child is the father of the man," and it is in childhood that the seeds are sown which in later years produce the juvenile offender and delinquent.

G. A. AUDEN.

The Common Neuroses. By T. A. Ross, M.D., F.R.C.P.E. London: Edward Arnold & Co., 1923. Demy 8vo. Pp. ix + 265. Price 12s. 6d.

In his preface the author expresses the hope that although little in the pages of his book is original yet it "may fill a gap." It may be said at once that it does much more. The reader has not dipped far into the subject-matter before the skill with which Dr. Ross faces the essential problems of psychotherapy interests and charms him. Here is found no involved argument, no long-winded dissertation upon abstract principles, but a quiet, forceful and sympathetic description of the methods recommended for adoption. Step by step, as each chapter proceeds, we are led through the progress of an illness, and illuminating examples of points upon which stress should be laid are given with judicious compression; so that the general practitioner, for whose guidance the author especially claims to write, should find not only new interest in treating the functional side of general diseases, but should be stimulated and encouraged to proceed at once to the simpler methods of psychotherapy, which, as Dr. Ross rightly assumes, are more likely to be successful, if only by the smaller demands made upon the time of a busy man, than a

profound study of, or a rigid adherence to, one of the more formal methods of procedure.

The preface contains a graceful acknowledgment to those psychologists to whom the author considers himself most indebted, and an especial tribute to the work of Déjerine, "who lived in a plain work-a-day world," and who wrote at a time when "the most enthusiastic of the English psychotherapists" were already under the spell of the "much more brilliant and fascinating conceptions" of Freud.

The introductory chapter begins by defining the nature of a functional disorder, and it is pointed out that no attempt is made to distinguish between the neuroses and psycho-neuroses. It then deals with alleged physical causes, and reviews in turn the various regions of the body which have from time to time been blamed for the occurrence of chronic ill-health, deflected nasal septum, the sinuses, astigmatism, dropped kidney, general visceroptosis, the uterus, auto-intoxication, and so on; it is pointed out that in each case the ailment is minor rather than major. The author's experience of the Weir-Mitchell treatment is given as an example of a method which became in his hands less and less successful as he himself gradually lost faith in it, and a strong point is made of the essential basis of his therapy: "This book will advocate faith and hope, . . . not faith in a treatment or in a doctor, but the method by which these patients can re-acquire faith in themselves." Dr. Ross claims to distinguish between a neurosis and a psychosis, and assumes that the psychotic lives in a world of "fantasy." We object to this use of the word fantasy, which means "castle-building," as being synonymous with "delusion"; also some psychotics are of course deluded, but by no means all, and he would indeed be a clever man who could always diagnose, for example, primary dementia, in spite of all the treatises which have been written about it, by any other method than the outcome of the illness. Dr. Ross attributes the "clear distinction" between sanity and insanity to some remarks made by Dr. Devine. The distinction is not in all cases "clear"; we only wish it were; and we consider he has misunderstood Dr. Devine's reference.

Chapter II deals with some of the views of the psychogenic origin of the neuroses, and stress is laid upon the emotional reaction. This may take a form which is positive or negative, and it is defensive. We do not quite follow the author here, and cannot altogether agree with the distinction, especially as later he regards the positive as the basis of neurasthenia, the negative as that of hysteria. Many emotional reactions are not defensive, and the psychogalvanic reflex constitutes a response to either autonomic or sympathetic disturbances. A short review of Pavloff's work on the conditioned reflexes introduces the conception of unconscious mental processes. No rigid line is drawn between the unconscious and the preconscious—advisably, as the author says, in order to avoid barren philosophical discussion. He hints at the doctrine of determinism, but gives a poor example—the refusal to commit a murder under hypnosis. This refusal only means that the summation of afferent stimuli is under the given set of circumstances subminimal. We think more stress might have been laid on the vast bulk of the unconscious (in the strict sense) as

opposed to the conscious experiences, but as most ordinary neuroses have preconscious urges, the distinction would perhaps be more academic than practical in a book of this kind. The author says that in his view the emotional reaction and the conditioned reflex are sufficient to account for all the phenomena of the neuroses. The chapter ends with a short review of the endocrine processes.

Chapter III classifies the neuroses under neurasthenia, hysteria and the compulsion neuroses. As long as causes are undetermined, one name is as good as another, and the author's classification is simple and practically useful, although, as said above, the basis scarcely bears analysis. The author does not attempt to define any such state as psychasthenia among the third class of ailments.

Chapter IV, dealing with the symptoms and signs of neurasthenia, is one of the best in the book, sufficiently full without being discursive, introducing well-chosen cases as illustrations, easy to grasp and eminently practical; not a word could have been omitted. Curiously enough, no mention is made of intention tremors as an accompaniment of anxiety. We have lately seen two ex-officers in whom this apparently superficial sign was prepotent, but who had been treated for many months in pension hospitals without benefit. One was a medical man who could dispense, drive his car, open abscesses, etc., without emotion, but who could not thread a needle or tie a suture. The other was a lawyer who could conduct petty session cases, but not county court. In the latter he became intensely nervous, stammered and lost his voice.

In this chapter are to be found some very sensible remarks on the subject of masturbation, which is alleged to be in males "to all intents and purposes universal." About women he is not prepared to make a definite statement. The practice is, of course, not universal in either sex, but it is commoner in women than in men. As it is not discussed among the former and has never been made the subject of a taboo, therefore it rarely forms the basis of an anxiety complex.

Chapter V deals with diagnosis, first between the several neuroses, where their interchangeability is pointed out, then of cases where an organic bodily disease is complicated by neurasthenia. Much space is devoted to the danger of confusing the latter with a psychosis. Nearly all the author says here is in a sense true, but the result is unsatisfactory. As we have already stated, we do not believe a diagnosis can be made in all cases between, say, melancholia and neurasthenia, or at least we cannot ourselves do so. We have had three or four cases under observation on pension boards for five and six years, who were to three neurologists typical neurasthenics, but who in the end committed suicide. The author says all these patients (depressives) will recover "if kept from suicide." This statement is too absolute; it is not true of manic-depressives in mental hospitals, although it is nearer the point as regards the earlier cases seen in consulting practice, provided cases of true melancholia are rigidly excluded. Nor do we believe that ordinary superficial analysis does harm to the depressive, although obviously no one can claim that he has thereby shortened the duration of any case.

The next four chapters, occupying 96 pages, deal with the treat-

ment of neurasthenia up to the point when, in some cases, owing to absence of progress, the author begins to consider the advisability of resorting to psycho-analysis. It is impossible to praise these chapters too highly. They carry us by easy stages through the cases, drawing attention to necessary points, discussing typical examples, warning against pitfalls. The general method used corresponds roughly to William Brown's method of autognosis. Each set of symptoms is discussed with the patient, then explained and evaluated, and hope is inculcated. Particularly valuable is the description of the author's method of treating insomnia without drugs. These chapters form the backbone of the book, and stamp it as the work of a man more than usually gifted with an insight into human nature. Patients who relapse or who display some refractory complexes Dr. Ross treats by free association. In the preparation of the patient for the *séance* he omits to mention the necessity for visceral comfort, an empty bladder and the avoidance of a previous purgative. In describing residual symptoms he recalls the difficulties created by the continuance of war pensions or awards under the Workmen's Compensation Acts. Some county courts are notorious for encouraging the persistence of neurasthenia after accidents, and it is impossible to omit from censure in this respect some members of the medical profession. He also emphasizes the importance of present anxieties in causing emotional disturbances. The "unawareness" of the author, like the "unwitting" of Rivers, roughly corresponds to the "preconscious" of Freud. A short reference to the genetic factor in the neuroses ends the section.

Chapter X deals with "The Freudian Method," and it is evident that the author rarely has use for psycho-analysis, so that one might almost gather that it is his particular "anxiety complex." But, surely, as the early embryo is either somato-plasm or germ-plasm, so, biologically speaking, there can be only two primary instincts, the nutritive and the procreative. Later comes the herd instinct, modifying both, and in man especially modifying and suppressing the sex instinct. The sex instinct of Freud (¹) is merely the unsublimated primary urge, in spite of Dr. Ross's denial (p. 169). Then, again, dealing with symbols, no practitioner would straightway suggest sexual interpretations to his patients, yet they are of great use in shortening inquiry. During the war a discharged soldier came under our treatment suffering from acute katatonia. He was mentally unapproachable, but at intervals sprang shrieking from bed. Once he shouted out that a man was after him to stab him in the buttocks with a dagger. When his parents were interviewed the father stated that the patient, when a little boy of five, came home crying one day, complaining that a man had pulled him about. As he did not seem to be injured they had not believed his story, but when his mentality became dissociated the unconscious complex emerged, and the history of the case was revealed. Further, modern views do not support fixed symbols; their value is historical, and changes with changed social conditions. We can recall a whole dinner table on one occasion convulsed with self-conscious laughter when an elderly guest described

(¹) *Introductory Lectures on Psycho-analysis*, Riviere's translation, p. 268.

a fox stole as a "fur tippet." To a former generation the name was well known, but to the present it became a mere onomatopœic symbol.

After a final chapter reviewing the treatment of neurasthenia we have two on hysteria. The main mental and somatic signs are discussed, and the danger is noted of removing hysterical complexes directly, only to see them replaced by neurasthenic. How true this is we all know; there are no hysterics now on pensions boards; they have all become confirmed neurasthenics. In dealing with trance the author speaks of coma when he really means stupor. In the examination of cases he does not mention the usefulness of the copper brush with varied strength of interrupted current. It is explained to the patient that the object is diagnostic, not curative, and then one judges anæsthetic areas by the behaviour-response without the necessity for asking questions. Attention is drawn to the danger of mistaking early organic diseases for hysteria, especially in the vague lenticular degenerations, *paralysis agitans sine agitatione*. We have found even greater difficulty in the case of new growths in the spinal canal, especially diffuse meningitis.

A short chapter is devoted to the compulsion neuroses and the author emphasizes the difficulties of treatment. The cases quoted show sex colourings, but Freud's contention that all have such is not mentioned. Deep psycho-analysis is not recommended. Our own view is that it does not much matter what is done. These cases are all near the border-line and many become chronic psychotics.

The final chapter on the manic-depressive psychosis may be of use to general practitioners, but it seems a pity to have introduced it. Manifestly only the depressive phase can be treated in an ordinary nursing home, and there is an unnecessary period devoted to rest in bed. The treatment recommended is a pale shadow of that used in mental hospitals, the medical officers of which would be horrified at the amount of sedative drugs recommended. We consider five hours' sleep on alternate nights adequate to keep a patient going. After all, drugs only paralyse the cortical oxidases and further deplete the lipid content of the neurones. Their use is to allow the removal of fatigue products, and every effort should be made to avoid them. They are rarely necessary in the depressive phase.

Such is Dr. Ross's book. We have here and there criticized the theoretical side of his views, but these are merely matters of opinion. We are not out for maintaining at all hazards any psychology founded upon the enlarged prostate, but we do think that the author scarcely gives full acknowledgment to the biological, physiological and ethnological aspects of Freud's work. However, from the practical side, and within its limitations, we have not met with a better book for some time—one which tells so exactly what is to be done and just how to do it. The author is to be heartily congratulated on the result of his labours.

A few errors call for correction in a reprint, "defect" for "defective" (p. 45), "stuporose" (p. 54), "colitus" (p. 103), "ulva" for "ulna" (p. 200).

W. F. MENZIES.

Problems of Dynamic Psychology: a Critique of Psycho-analysis and Suggested Formulations. By JOHN T. MACCURDY, M.D. Cambridge: The University Press. New York: The Macmillan Co., 1923. Crown 8vo. Pp. xv + 383. Price 12s. 6d. net.

As a result of his psycho-analytical experience and an exhaustive study of Freudian literature, Dr. MacCurdy has discovered a number of what he believes to be inconsistencies in Freud's formulations. He has also been led to the view, more especially from the study of epilepsy and the war neuroses, that morbid processes other than sexual are responsible not merely for isolated symptoms, but for the very core of the abnormal reactions. This book is the outcome of these views, and, as the author explains in his preface, it has a twofold purpose: "On the one hand it is an attempt to show from demonstration of the limitations and inconsistencies of Freudian formulations that a broader system is needed, while, on the other, an attempt is made to outline some tentative hypotheses to make good this need."

Part I of the volume is devoted to criticism, and in successive chapters the author briefly discusses Freud's views on the unconscious, instincts, sex, repression, the psychoses and neuroses, emotions and dreams. The criticisms are chiefly directed to the more recent developments of psycho-analysis, and since these are intricate, obscure and not generally known, Dr. MacCurdy's discussions will only be comprehensible to the thoroughly informed psycho-analyst. The ordinary reader, we fear, will find them tedious and inconclusive.

Part II consists of two chapters in which the author discusses the relationship of psycho-analysis and suggestion. Dr. MacCurdy regards both suggestion and psycho-analysis as valuable therapeutic methods, and expresses the opinion that these are the only two fruitful methods ever devised either for the investigation or treatment of the psychoneuroses. He includes in this section a particularly interesting comparison of material gathered by hypnosis and psycho-analysis from the same patient.

The discussions in Part III show a continuity of theme which is lacking in the somewhat scrappy and disconnected criticisms of the earlier chapters, and for this reason they are much more readable. The author here considers the preconscious phase of development, and uses as his texts Ferenczi's work on *Stages in the Development of the Sense of Reality*, Freud's views on infantile sexuality and auto-erotism, and Burrows' *Principle of Primary Identification*.

Before developing his own views in Part IV, Dr. MacCurdy gives a long criticism of Rivers' book, *Instinct and the Unconscious*. This chapter might perhaps have been omitted, as it tends to deflect the attention of the reader from the fundamental theme of the author, namely the defects of Freud's formulations and how they may be remedied. It is difficult to turn from consideration of a series of complex theories of one kind to others developed from an altogether different angle. The continuity of the argument is broken.

The remaining chapters are constructive, and in them Dr. MacCurdy explains his own psychological scheme. In common with other writers he is dissatisfied with the exclusive importance placed by

Freud on the sexual as an explanation practically of all psychopathological phenomena, and he feels that any general formulations must include the factors of ego-instincts and social instincts as well as sexual. Broadly speaking these views differ from those of Freud by the addition of the "herd instinct," since the conflict between sexual and ego-instincts is the basis of Freud's psychology. Though there may be a certain pragmatic value in dealing with social trends as additional to those of sex and self-preservation, we do not feel convinced that Dr. MacCurdy has altogether justified the inclusion of "herd instincts" within the boundaries of the psycho-analytic scheme. This instinct is already embodied in Freud's notion of sex—a notion to which Dr. MacCurdy himself gives general adherence—and to postulate it as a separate instinct would seem to be superfluous. Freud defines sexuality as follows: "The nucleus of what we mean by love naturally consists (and this is what is commonly called love, and what the poets sing of) in sexual love with sexual union as its aim. But we do not separate from this—what in any case has a share in the name 'love'—on the one hand, self-love, and on the other, love for parents and children, friendship and love for humanity in general, and also devotion to concrete objects and to abstract ideas." Freud has dealt in detail with the "herd instinct" conception in his book on *Group Psychology and the Analysis of the Ego*; and, given his wide definition of sex, the "herd instinct," as he shows quite logically in his book, is a natural development of externally directed libido, and not something distinct from it or capable of being separated. As the argument in this book has a direct bearing upon Dr. MacCurdy's amendment of Freud's theories, it would have been as well if he had included it in his discussion.

Quite apart, however, from any question as to the inclusion or otherwise of "herd instinct" into psycho-analytic formulations, it must be pointed out that, except in a very limited sense, this instinct has not found favour amongst general psychologists, though they do not deny that the social phenomena attributed to its operation are deserving of careful study. It is felt that the concept is too vague, that altogether too many phenomena are ascribed to its workings, and that it exhibits the fallacies of the older faculty psychology. In the sphere of psycho-pathology it is difficult to feel that morbid symptoms can be due to an excess, a weakness, or a perversion of so nebulous a tendency as the "herd instinct." A disturbance of social reactions is of course almost constant in the psychoses, but we do not attribute it to "the loss of herd-instinct," such a statement being descriptive rather than explanatory; we explain such a disturbance by reference to other conditions which may be present, or to the influence of more tangible instinctive forces. Dr. MacCurdy himself describes how the feeble-minded show an exaggerated docility to group opinion. Quite so; but he does not explain this by stating that such persons have an "exaggerated herd instinct," but rather by referring to the lack of intellectual development which exists. The whole question is ably discussed in a paper by Dr. Ian D. Suttie, entitled "Critique of the Theory of 'Herd Instinct,'" which was published in this Journal of July, 1922.

Though there may be a certain hesitation in accepting Dr. MacCurdy's formulations, his observations throughout this book are full of value and interest. Especially do we welcome his frequent references to morbid symptoms as manifested in the psychoses. He is fully qualified to write on this subject, and it has been a most interesting occupation for the reviewer to refer to the author's various papers dealing with the psychology of the psychoses. It is much to be hoped that he will continue his clinical studies in pure psychiatry, because at the present time facts rather than formulations are urgently needed.

H. DEVINE.

Contraception (Birth Control): Its Theory, History and Practice. A Manual for the Medical and Legal Professions. By MARIE CARMICHAEL STOPES, D.Sc., Ph.D.Lond. John Bale, Sons & Danielsson, Ltd., 1923. Demy 8vo. Cloth. Pp. xxiv + 416. Illustrated, 4 plates. Price 12s. 6d. net.

One of the solutions, advanced with every degree of confidence, of those problems which seem to be associated with over-population and over-crowding of people in great centres of communal life is "birth control," or, as Dr. Stopes names it, "contraception."⁽¹⁾

These problems are of two kinds—national and individual. Birth control, as it affects the well-being of the people as a whole, is of interest chiefly to the sociologist and political economist, but it also comes within the sphere of public health, which includes mental diseases. In addition it has moral and religious aspects. The practising physician, however, is in the main directly interested in what might be called legitimate birth control, *i.e.*, birth control as thought necessary for the physical and mental benefit of individual patients.

A section of the present work by Dr. Stopes deals with birth control in this latter and more restricted sense, and has therefore some claim to the special consideration of psychiatrists who may have, for mental reasons, to advise the suspension or the entire cessation of child-bearing in particular cases.

The subject of birth control is many-sided, and there are few aspects Dr. Stopes does not touch upon, thus providing much material for reflection and discussion. But we must need restrain ourselves—howbeit unwillingly—and select those aspects for comment which we imagine will most interest our readers.

In its larger relationships, it should be remembered that birth control, though advanced as a remedy for certain evils, as far as it is contraceptive, presents in itself an active social problem, and some would say a social evil. Contraception is by no means a growth of recent years. One of the most valuable sections of the book is

⁽¹⁾ We are not quite sure whether the author considers these synonymous terms. Apparently she does. We think, however, that there is, or should be, a distinction. Contraception to us means the prevention of conception only. Birth control has a much wider meaning. It is an intelligent allowing of, or prevention of conception. It is applicable to the married states only. It would be ridiculous to use the term "birth control" for the sexual intercourse of unmarried people or illicit unions. On the other hand, it is conceivable for contraception to be freely practised by single and married alike. It should therefore be understood that in this review we make this distinction when using these terms.

that formed by Chapters IX, X, XI, which deal with the history of contraception and birth control from primitive times down to the present day. There is here presented for the first time a complete history of the subject, with full documentary evidence, there being a reference for every quotation made, all of which must have involved a colossal amount of research work. This is most deservedly alluded to, among other matters, in the "Introduction" written by Sir William Bayliss, and in an "Introductory Note" by Obscurus. We might mention here that Dr. Jane Hawthorne, Sir James Barr and Dr. Christopher Rolleston also write "introductory notes." We doubt very much the advisability of loading a book with such additions. In the present instance some matters are commented upon in a way which did not encourage us to proceed further.

To continue, Dr. Stopes in these chapters shows that contraception is a practice of antiquity. Birth control, however, would appear to be of more recent origin. That contraception is widely resorted to now, especially among the educated and more provident classes, cannot be disputed. As to how much it is associated with birth control it is impossible to say—probably very little. It must be remembered that birth evasion is not birth control.

The first question to arise in our minds is as to whether married couples are to continue to be a law unto themselves in this matter. Common sense replies in the negative.

How, then, can sound knowledge as to the circumstances under which contraception is necessary, and the best method of securing it, be brought home to the right people? By familiarizing everybody with the methods of contraception? By preaching sterile sexual intercourse as the ideal and the application of the science of eugenics to conception? Should it not rather be taught that it is a crime against Nature and against the fatherland for married people to evade the privileges and opportunities of parenthood—to set up a false god in this matter—unless there are good reasons why and wherefore? Is the science of eugenics sound enough to fashion the future evolution of the race? Is the policy of the Society of Constructive Birth Control and Racial Progress, and of similar societies and leagues referred to in Chapter XI, practicable, and not fraught with danger to the moral and physical welfare of the community? Are the proposals advanced by these bodies opposed to those processes of evolution which have brought mankind to its present level, and do they amount to a substitution of natural methods of attaining the same end? If the latter, is it not a vain thing and foolish? Has the ancient practice of contraception had any material effect in racial evolution.

These are some of the many questions which arise in our mind as we pass from chapter to chapter in this illuminating but controversial book.

Chapters I and II deal with the problem of contraception to-day and some theoretical desiderata. Dr. Stopes views the fertile married woman as the most important patient of the medical practitioner. "As so large a proportion of female illhealth can be directly traced to an excessive number of pregnancies in too rapid succession,

and to pregnancies under unsuitable conditions, it is obvious that the proper use of contraception as a fundamental health measure is the practitioner's concern." It is in order to equip the general practitioner with the requisite technical knowledge regarding contraceptions that she has written this book. A comprehensive manual did not exist, though the literature on this subject has grown to be enormous during the past decade. She puts forward the plea that every married woman should, if she desires it, be supplied with reasonable information by her medical man on sexual physiology and the use of contraceptions, also that the woman, being the sufferer, should at least be granted the privilege of sacrificing herself voluntarily when required to add to the population. She quotes striking figures from the Ministry of Health that 3000 women are lost annually by childbirth, and 700,000 so injured or disabled in pregnancy or childbirth as to make them chronic invalids.

Supposing it were possible to bring to such women the knowledge and opportunity of contraception, how far would they avail themselves of it? Do not a greater number of healthy married women fully capable of maternity evade child-bearing because they cannot be bothered with children, or prefer to expend their money and energy in other directions? Would not still more married couples join the latter class if the teaching to be found in this book were broadcasted? Would not the effect then be a mere lowering of the birth-rate and not a constructive birth control?

There may be hope, however, if it is preached far and wide, that the use of contraceptives is an evil thing and harmful to the race, except under medical advice, and that true birth control (which includes birth spacing) can only be soundly directed by the medical practitioner under conditions we shall refer to later.

In Chapter XIV the author has much to say about birth control clinics, especially that founded by her and her husband in March, 1921. It is noticed that included among the patients eligible for advice are (c) all married people whose economic conditions obviously preclude their doing justice to more children, (d) all married men and women who ask for it. There is danger in (c), while (d) defeats the objects of the clinic. She does not consider that more clinics of this kind are necessary as independent units. She would hand over the work to the ante-natal clinics and the infant welfare centres. Do not many young people of the V.A.D. class work voluntarily at these centres, and are their services likely to be retained if this comes to pass? It may be possible, however, that in this way the use of contraceptives for proper purposes among the poor people could be directed and controlled by the Ministry of Health. No doubt the Ministry would strictly limit the class of persons to be assisted.

As regards the medical practitioner's duty in this matter, she says: "Hence the medical practitioner who has a practice among the poor and ignorant, and particularly among low-grade elements, has a double duty to inculcate contraceptive knowledge—a duty to his individual patients, and a duty to the State." And again: "The prime object of the medical profession being the health of the community, a full knowledge of contraception should be one of the doctor's most

useful adjuncts." Chapter XIII is devoted to "Instruction in Medical Schools," and there she laments the fact that the proper use of contraceptives is not yet officially recognized in the medical schools.

Our impression is that Dr. Stopes is not in favour of any limitations to the spread of knowledge of the use of contraceptives, but believes that the public generally should be educated up to the carrying out of a constructive birth control with the aid of contraceptives to arrest the growth of degeneracy and to raise up a more intelligent and healthy race. It should be noted at once that the logical carrying out of Dr. Stopes's proposals would mean that practically all married couples would use contraceptives, for under birth control she includes birth spacing by contraceptive methods.

She desires the medical profession to join this movement—to be at once its propagandists and its servants. It is apparent, however, that she would not approve of any dominance by practitioners generally, for in discussing the legal position (Chapter XII) she stigmatizes Prof. McIlroy's proposal that the use of contraceptives should be put on the same ethical footing as abortion for medical reasons, as dangerous and retrograde.

It is obvious from our comments already that, while welcoming Dr. Stopes's book as an exposition of great value of the purely medical aspect of contraceptives and their use, we find ourselves entirely out of sympathy in her treatment of the subject of birth control generally. She envisages the time when "the great public awakens to the need for instruction in normal healthy sex procedure, etc." This is pre-faced by the remarkable statement that "No science is more swayed by public opinion and guided by public demands than medicine." We would have thought just the opposite.

If the public ever does awake to the importance of birth control in its true sense, it will act, and act strongly. Nor will its awakening be limited to this aspect of a great social problem. It will certainly not leave the moulding of the race to everybody's and anybody's fancy and unfettered judgment. A real birth control will be established, and we have no doubt that the medical profession will be called upon to assume a grave responsibility regarding its practical application.

At the present time the use of contraceptives is mainly for vicious and selfish purposes, and is likely to remain so until the birth-control movement is put upon a really practical, wholesome, and sound biological basis which could command general acceptance.

The birth control movement takes but a narrow view of the problem it has in hand. As at present advocated, like its first cousin, "the sterilization of the mental defective, etc.," it is a cheap and dangerous method—a short cut—of avoiding the real solution, and that is the "cleaning up" of the seamy side of modern civilization—a costly and altruistic matter entailing much self-discipline and self-sacrifice—an undertaking which would make the earth a place fit for all men to dwell in and not merely comfortable for the comparatively few. To attempt to mould the race to fit in with the unhealthy life and degrading environment of many of our people is pre-doomed to failure.

Given a favourable environment and a healthy mode of living,

mankind, guided by the instincts of self-preservation and of the herd, can be trusted to make those adjustments necessary for its onward progress. This in itself will go far to solve the problem. We are not contending that there is no place for birth control in man's further evolution, but let it be a real one—one that will encourage and discipline the best of the race to be fruitful and multiply and, at the same time, check the survival and propagation of the unfit. But no scheme of birth control can have any finality or be effective unless accompanied by a comprehensive measure of social and economic reform, and the abolition of those environmental conditions, both active and passive, which are the springs from which the stream of degeneracy arise. Until then contraception can only be justifiable, when sexual abstinence is impossible or inadvisable, in individual cases and for mental and physical disabilities, subject always to medical approval and direction.

The soundest position is that stated by Prof. A. Louise McIlroy, who says—"The normal healthy function of marriage should not be interfered with, and if children are the result, sacrifices must be made for their proper upbringing and welfare." If this had not operated in the past, how many of us would have been here to-day?

Dr. Stopes, in discussing various theoretical desiderata, lays stress on the view that the coital act is "an extremely complex social function in which the woman (as well as the man) is an active partner, and from which both derive physical, mental and spiritual benefit if this act is fully and correctly performed." She is also a firm believer in the idea* that the seminal fluid is not a procreative substance only, but contains a "hormone" or some stimulant which benefits and nourishes the entire feminine organization, and that it is absorbed in the vagina. These ideas naturally influence her a good deal when she comes to deal with the various ways of securing contraception.

Now we think her well-known views on sexual intercourse are biologically unsound, but their propaganda is not the special purpose of the present book. They are mentioned in the course of her arguments, and our readers, especially those to whom her presentation of sexology is repugnant, need not hesitate to read her book on this account.

In our opinion the glorification of the coital act is not likely to assist the birth control movement. We were always under the impression that any moral or spiritual values in connection with the exercise of the primary instinct of reproduction were to be found in the fact that this instinct is also the foundation of altruism, *i.e.*, maternal love. "The highest moral sentiments, indeed, have their roots in this primal instinct necessary for the preservation of the species" (Mott). Love and passion are indeed strange bedfellows—a necessary partnership to secure the survival of the species, which dissolves naturally at the earliest possible moment. Maternal love and that coarse, but intense physical pleasure "often mingled with anger" (Mott) associated with the coital act is common to all higher

* The notion that marriage benefits nervous, anæmic and delicate young women is widely spread and we have heard of it as long as we can remember. It has no place however in modern therapeutics or eugenics.

animals. Maternal love has spread to both sexes in the course of evolution, and in mankind finds its outlet in the exercise of those ethical and spiritual attributes which distinguishes man from all other animals. But the coital act has been passed along unchanged—some would say degraded. It is the act of the beast impelled by a craving which knows no conscience or pity. It is the very antithesis of things spiritual, being relentless and immutable. For centuries the social, moral, and religious forces have attempted the shackling of Priapus—to unite love and passion permanently in married life. The failure is pathetic but inevitable. But love can and often does survive when passion dies, and forms a bond indissoluble—that love which is the foundation of true comradeship, whether between man and wife, parents and children, or between brothers or sisters or merely friends.

How finely this is put by James Jeffrey Roche in "My Comrade":

"The love of man and woman is as fire
To warm, to light, but surely to consume
And self-consuming die . . .
But comrade-love is as a welding blast
Of candid flame and ardent temperature
Glowing more fervent, it doth bind more fast;
And melting both but makes the union sure,
The dross alone is burnt—till at the last
The steel, if cold, is one and strong and pure."

With regard to the view taken by Dr. Stopes that the seminal fluid contains a "hormone" or invigorating substance which is absorbed by the woman through the vaginal walls, this is not based upon any data as yet acceptable in a scientific sense. In 1922 Prof. Arthur Thomson gave prominence to this subject in a lecture which was published in the *British Medical Journal*, and some correspondence ensued. Prof. Sir William Bayliss in his introduction to this book says: "As a physiologist, I could wish that stronger evidence were to be obtained, etc. It must be admitted, however, that the evidence given is very strong and that cogent proof is difficult." We are not persuaded that the seminal fluid can have any function other than that necessary to procreation. We think it very unlikely. We do know, however, that at one coitus some 270 million spermatozoa are set free, each capable of fertilizing the same number of ova, and resulting in population sufficient for a continent. We know also that any internal secretions of the testicle or prostate are absorbed by the man. There can be no doubt as to the real function of the seminal fluid as ejaculated, and such confusion of purposes as suggested by Dr. Stopes and others is physiologically inconceivable. The dignity of manner and mental and physical solidarity many have observed in women to follow marriage, and before maternity, but more frequently afterwards, no doubt has something to do with sexual education, but it is as often as not absent in married women, and not uncommonly found in single and chaste women.

The rationale of the presence of this hormone is about on a level with that of the spiritual consolation held to be associated with the coital act. If, however, her contention is right, it is a strong argument

in favour of the method of contraception she advocates as most approaching the ideal.

The main importance of the book to the medical practitioner lies in Chapters III to VII. Here he will find probably all that is known about contraceptives.

Chapter III is devoted to "Indications for Contraception." These mainly centre round such conditions as active syphilis, congenital blindness, virulent tuberculosis, acute heart disease, kidney disease, epilepsy, leprosy, diabetes, marked feeble-mindedness and, as revealed by former pregnancies, puerperal insanity, feeble children, severe albuminuria, serious eclampsia, various toxæmias, spinal and pelvic deformations and Cæsarian sections within two years. In addition, contraception is advocated for such sociological reasons as chronic alcoholism, inability to afford additional children, during periods of prolonged unemployment, fear of "bad times" at childbirth, etc. The former may be called medical and the latter non-medical indications for contraception. The use of contraceptives for birth spacing Dr. Stopes thinks is generally indicated "even on the part of the healthiest woman." A number of cases illustrative of these indications are given.

As far as the more medical indications are adduced, most practitioners will agree that it is advisable to cease or suspend child-bearing. There would not be much difficulty in securing this in many of the cases, for there would be either impotence, or the physical state of one of the parties would give rise to such repugnance that coitus would be impossible. In other cases to attempt the act would be brutal with or without contraceptives. In many cases coitus would be entirely forbidden.

As to the non-medical indications, here Dr. Stopes is guided by her views on the physical and mental and spiritual (?) benefits of continuing if possible full sexual life as against sexual abstinence. Have blessings ceased to flow from the exercise of the virtues of self-discipline and self-sacrifice? Has not the herd or social instinct provided an outlet for the sexual "urge" in the social life, in religion, art, music, sport, literature? Are not the crude impulses which go to form the instinct of self-protection similarly sublimated in the interests of herd? Is not the social fabric based upon self-restraint and self-sacrifice? For what reasons are married people alone to be singled out to enjoy the physical, mental and alleged spiritual benefits of sexual pleasures without undertaking at the same time the duty and responsibility of bearing children? Have not social necessities forbidden these pleasures to single people? Are not those married people who for some reason fail to carry out the main purpose for which marriage was instituted comparable with single people in this respect, and is it a very great hardship to ask of them the same sexual abstinence? If racial efficiency alone were considered would not these unions be dissolved and the healthy partner freed to marry more effectively?

It must be admitted, however, that there are psychopathically inclined persons to whom a sudden cessation of full sexual life would mean mental conflict and the appearance of a psycho-neurosis or

even a psychosis. In the case of those unions dissolved by death re-marriage would be advised, for resource to prostitution has always been disastrous apart from the danger of venereal infection. Where the cessation is voluntary and there are indications of nervous or mental disease as a result, the case becomes a medical one, and it is conceivable that the use of contraceptives would be indicated and sexual relationships resumed.

The general experience of psychiatrists is that abuse of the sexual functions rather than sexual abstinence leads to nervous and mental breakdown. Curiously these are often "loveless" couples, and the sexual act has been degraded to a mere regular habit. In addition to puerperal insanity there are cases of exhaustion from coitus interruptus, masturbation, too frequent pregnancies, prolonged lactation. Birth spacing accomplished by the necessary sexual abstinence rather than by free indulgence and contraception would prevent the occurrence of many of these cases and incidentally preserve to them the sexual act in its healthiest form.

The nation suffers from two conditions in sex matters as regards mental health: (1) the failure of some single people to sublimate their sexual cravings for their own good and for the welfare of the community, and (2) the failure of many married couples to sublimate such of the sexual instinct as is surplus to reasonable propagation of the species—a failure which is fraught with mischief to themselves and to the race. Sexual indulgence with contraceptives brings greater disasters to the former, and as regards the latter, only if there is any grave danger to mental and physical health might it be necessary to advise the use of contraceptives.

In Chapter III the many true contraceptives in use are classified, and in Chapters IV to VIII they are described, discussed, and made more intelligible by illustrative cases. There can be no general agreement as to the best form of contraceptives. It depends entirely upon the nature of the case. The method which Dr. Stopes advocates as most generally useful is well known and need not therefore be described here. It secures, in her opinion, the most natural and beneficial carrying out of the coital act, and incidentally preserves to the woman the advantage of absorption through the vaginal wall of the alleged "sexual hormone."

There is, however, to be found in these chapters a fund of useful information and practical guidance relating to contraception in its clinical aspect, well worthy of the attention of practitioners of medicine.

In the following chapter the author answers some objections which are put forward to contraception. We feel bound to say that many of them are effectively dealt with. As to ourselves, we have tried to approach this subject with an open mind, and our objections have been biological and physiological rather than sociological or medical.

Dr. Stopes, in dealing with the complaint that "contraception is not natural" is wrong when she says "that in this sense, the whole of civilization is 'not natural'; that tooth brushes, eyeglasses, chloroform and telephones are each and all as much a violation of

'Nature's laws.' " Many animals have methods of dealing with their acquired physical infirmities, some of them very sagacious. Mankind makes adjustments which are more clever and effective because of his immense and complicated nervous system. They are nevertheless just as natural. With it has developed the social instinct and altruism in its highest sense. These are also natural. It follows that to modify, in the interest of mankind, the law of "the survival of the fittest" is likewise natural.

What is unnatural is to stultify racial progress by permitting environmental conditions detrimental to self-preservation. Race preservation and birth control originate in the instinct of the herd, which takes its origin from the two primary instincts. Birth control by the use of contraceptives is unnatural in the sense that it ignores the natural tendency to sexual abstinence, and to sublimate those surplus driving forces of our nature by which means alone can man progress to a higher life. It is reactionary in that it gives undue prominence to the procreative act, and encourages its occurrence when such surplus energy could otherwise be directed for the common good. This mighty heritage—the procreative act—it degrades to a form of routine physical pleasure, allots to it moral and even spiritual virtues, and then calls it an extremely complex social function. To accomplish this artificial aids are required. Are there not, then, good reasons for saying that the exercise of the sexual functions under these conditions is "unnatural"? Should not every act of coition mean the approach, the by-play of the love passion, the courtship and the marriage bed consecrated to a noble purpose, though of necessity despoiled by an act common to all animals? Is not this a true and natural method of birth control?

Dr. Stopes complains of the much loose writing there is against birth control by people who obviously have not given it much thought. We think she is justified in this, but we also think that a good deal has been written in its favour about which the same can be said. Dr. Stopes, however, is one who writes with an acute sense of responsibility. Her love for humanity cannot be disputed. Her views are expressed with a commendable moderation, and the sentimental side is kept well under restraint. Her method of dealing with her subject is scientific. The points she tries to make are closely argued, and nowhere is she discursive. She is careful always to give chapter and verse of her authorities when quoting facts, statistical or otherwise, and other people's views.

The reading of this book has been to us an interesting and stimulating experience, as will be apparent from the length of this review, and we can confidently promise the same to others. It has not persuaded us to support the present birth-control movement, but it has given us a valuable knowledge of its activities and of its potentialities.

The subject of birth control and the use of contraceptives is one of great importance—increasingly so—and it is well for psychiatrists who are vitally concerned in mental hygiene to be apprised of every aspect of it. That it has found an expositor in Dr. Stopes, whose facile pen and literary attainments are so well known, is a matter for congratulation and will be widely appreciated. J. R. LORD.

Insanity and the Criminal Law. By WILLIAM A. WHITE, M.D.
New York: The Macmillan Company, 1923. Crown 8vo.
Pp. ix + 281. Price 12s. net.

THIS is an important contribution towards the elucidation of the problem of "responsibility." Dr. White writes with the knowledge and experience gained during nineteen years of work as superintendent of Saint Elizabeth's Hospital for the Insane, Washington, D.C. We shall all agree with his statement that there is "a marked discrepancy between the knowledge of man and his motives, to which science has attained in recent years, and the concepts which have governed legislative bodies and judges." And he considers that the time has come in America (as it has in this country) for a survey of the situation and for the formulation of new principles.

Dr. White complains of the way in which expert evidence given by alienists in criminal trials is received in America, stating that the system under which it is given always makes it appear to be biased. In this country things are somewhat better ordered. For we possess, in the medical officers of our larger prisons, a body of experts whose evidence is always regarded as quite impartial, is always treated with the greatest respect, and is usually accepted by the court.

The author considers the popular assumption that insanity is often set up as a defence when all else fails, and that persons who should be punished often escape in this way, to be quite unjustified. He states that he has never known a criminal to escape conviction on the grounds of insanity where the evidence did not justify such a verdict, except in cases where the jury has used the plea of insanity to exonerate a man who was technically guilty, but with whose offence they sympathized. He gives, however, histories of cases in which the opposite result occurred, and in which men were executed whom all alienists would have regarded as irresponsible. The best known of these cases is that of the priest, Father Schmidt. The percentages given in the book for insanity and mental defect among prisoners are much higher than we should accept for this country.

It is shown that clear views on this subject are impossible unless we have carefully considered the nature of crime, and the theories upon which punishment is based. He indicates that crime (anti-social action on the part of individuals) will always exist, and will always produce reaction on the part of society. This reaction is, in part, due to the primitive desire for vengeance. But the matter goes much deeper than that. Man is always trying to get rid of something which makes him unhappy. And if this something happens to be a wrong according to the ethical standards of the herd, he attempts to escape his personal responsibility for it. In punishing the criminal, therefore, man is trying to get rid of the wrong which he feels is resident within himself. Hence the criminal becomes a handy scapegoat, and, by punishing the criminal, man "bolsters up his self-respect." The instincts which prompt society to punishment are sublimated under present conditions. And penal measures are conceived as being calculated to repress criminal tendencies, and thus to protect society.

On the question of psychological determinism Dr. White is very firm, although he is at pains to point out that the acceptance of determinism leaves the deterrent and reformatory aspects of punishment just where they are now. As he says, the new psychology delves beneath the surface of the obvious into the region of the unconscious in which reside the primitive tendencies of which the individual may be quite unaware, and which, in their efforts at self-expression, avail themselves of various paths by which their real meaning is obscured. Hence it follows that the proper treatment of any offender is a most difficult individual problem, and can only be solved after the most intensive investigation. Nothing short of this can ever be of real service. Recognition of this fact proceeds slowly, but we are gradually attaining it.

One feature of American criminal procedure we are, fortunately, free from in this country. Dr. White describes the "hypothetical question" which it is the custom to put to expert witnesses. He has heard hypothetical questions twenty thousand words in length, and taking two or three hours to read.

Dr. White discusses the American legal tests for insanity, which appear to be not unlike ours. There appears to be just the same uncertainty as to what is exactly meant by knowing that an act is "wrong." He points out that the present tests are "simply obsolete medical theories crystallized into rules of law." Thus medicine and the law have become inextricably mixed up, until it is generally supposed that insanity is a medical and not, as is really the case, a legal conception. He regards the time as past when the medical and legal professions could come together on these tests and find in them a basis of common understanding.

So far we should all agree. It is when Dr. White enters into his proposals for improvement that he reaches debatable ground. His suggestion is contained in the following draft law: "No person shall be convicted of any criminal charge when at the time of the act or omission charged against him he was suffering from mental disease, and, by reason of such mental disease, he did not have the particular state of mind that must accompany such act or omission in order to constitute the crime charged." So far as we can see, the disputes which would occur under this law would be just as frequent, as bitter, and as inconclusive as those which we have with our present criteria. It would seem better to omit all the words in the draft after "suffering from mental disease."

Dr. White considers that the sole function of the jury should be to decide whether the accused has committed the act charged against him. The question as to what should be done with the accused, if he were so found guilty, would then be taken up, and in the decision on this point the psychologist would, on any rational principles, have the final word. The true function of the criminal law is the rehabilitation of the offender, by turning his anti-social tendencies into useful channels. There are some offenders who cannot be rehabilitated. For these latter persons permanent detention would have to be devised. Our present method of dealing with habitual offenders has nothing to recommend it.

The necessity for the institution of schools of criminology, in which judges and others concerned with the handling of offenders should be compelled to take a course, is strongly insisted upon. Such a school would afford adequate instruction in the psychology of the criminal, and, we may add, that of witnesses. There is often need to consider the psychology of those who give evidence. We may, perhaps, hope that our universities, some of which now have schools of brewing, may take this matter up, even if the compulsory attendance of judges is, at present, a counsel of perfection. It is also claimed that judges should be obliged to spend some time as residents in a prison, as it is in this way alone that a judge can obtain any real knowledge of the human material with which he has to deal. Incidentally, he would also obtain knowledge as to the character of the punishment which he serves out.

The whole book is full of suggestive thoughts. Owing to a somewhat scanty system of punctuation, it is, at times, rather difficult to read. But we can heartily commend it to all who are interested in the vital problems which the author discusses, and who among our readers is not so interested?

M. HAMBLIN SMITH.

Autobiography of an Androgyne. By EARL LIND (Ralph Werner—Jennie June). New York, 1918. The Medico-Legal Journal. Pp. xiii + 265. Price \$4.

This is a book by the author of *The Female Impersonators*, noticed in the April number. It deals with the same subject—the life-history of a sexual invert. The author describes his various forms of sexual relations in considerable detail, these facts being set forth in a peculiar mixture of English and Latin. Great stress is laid upon the distinction, which, of course, exists, between the sexual pervert, in whom the taste for these practices is acquired, and whose rôle is active, and the true congenital sexual invert, who plays the passive part. The author belongs to the latter class. Apart from his sexual practices, he appears to have carried on a not unsuccessful business career. He also exhibits very marked religiosity. The book is a passionate plea for the invert. The author contends that these practices are far less anti-social than are many others which the law allows or condones. This may be true. And on the futility of punishing this form of sexual abnormality many might be disposed to agree. But it does not follow that these persons are to be allowed to do whatever they may desire in this direction. Society will always claim the right to control certain forms of conduct. Which particular forms of conduct these may be is, ultimately, decided by general public opinion. Public opinion strongly condemns these homosexual practices. We need not dispute as to the basis of this condemnation. The fact exists, and has to be faced.

This book is largely a repetition of the other, and neither contains much that is very new; but they are both of interest to those who study these particular matters.

M. HAMBLIN SMITH.

Abnormal Behaviour. By IRVING J. SANDS, M.D., and PHYLLIS BLANCHARD, Ph.D. London: Kegan Paul & Co., 1923. Pp. ix + 482. 16s. net.

The need for more scientific study of abnormal conduct has long been recognized by psychiatrists. But there is now an increasing demand for guidance on this subject, on the part of magistrates, social workers, teachers, and others. And an obligation is laid upon the specialist to pass on to the community the knowledge which he has acquired by his technical training and his capacity for research. He must, as the authors of this book say, present sufficient data to enable the average citizen to understand the value of the services which the specialist is capable of rendering to the community. When the specialist fails to do this, he pays for his neglect by finding that the community has no interest in assisting him to make further research. This book is an attempt to fulfil the obligation which has just been mentioned. It comes to us from America, but the greater part of it is applicable to conditions in this country.

In reviewing a book of this kind, at the present time, we look first to see what is its position in regard to the Freudian hypothesis and to determinism, acceptance of the former, of course, implying the latter. The authors of this book commence by taking their stand definitely upon scientific determinism. And they take Freud's hypothesis for granted, while giving a needed warning against the dangers of psycho-analysis as practised by amateurs. They realize that the instinctive and emotional life plays by far the largest part in the production of conduct. And they point out that all forms of abnormal conduct are anti-social, those forms of anti-social conduct which we term "criminal" being only one branch of the tree.

The book, therefore, starts with a consideration of the instinctive and emotional bases of human conduct, and a discussion of repression and sublimation, proceeding to the influence of emotional conflict in the production of conduct disorders. This is followed by a review of intellectual capacities and their relation to behaviour. There is useful criticism of the various schemes of mental tests in common use, and of their fallacies and drawbacks. Wholesale segregation of defectives, as diagnosed by the results obtained by some scheme of tests, has been suggested. The authors are strongly opposed to this. Granting that we have found our patient to be of defective intelligence, we have still to ascertain the relation which this defect bears to his conduct. Some defectives possess a considerable degree of insight, and such persons are often quite capable of filling humble spheres of work usefully. If a defective gets into contact with the law, or is actively anti-social in any other way, a different situation is created.

Under the heading of the "physical basis for behaviour," a chapter on anatomy and physiology is provided. We are inclined to doubt if this serves any useful purpose. Physical defects have their importance in this connection, but only in so far as they may produce the mental state which results in delinquency. The whole subject raises the question of the psycho-physical relation in an acute form. And,

in any case, such a chapter must be far too superficial. But if this be a fault, it is a minor one. And in its practical discussions the book is admirable. The relation of personality types to behaviour is excellently described. And there is a chapter on the psychoses, which is brief, but adequate in so far as it will enable a lay reader to comprehend how widely varying are the symptoms of the conditions grouped under this heading. The ordinary magistrate's conception of "insanity" is exceedingly restricted.

Epileptic conditions and the psycho-neuroses receive consideration. But the treatment of sexual abnormalities is too brief. It is of urgent necessity that magistrates should understand how varied are the mental abnormalities which may be found in cases of "sex" offences. Expert examination of all such cases is one of the first practical steps which should be taken.

The topics of alcoholism and of drug addiction are handled with commendable restraint. The authors point out the strange and unsatisfactory position in which recent prohibition legislation has placed the medical profession in the United States.

There is a chapter on suicide. The authors comment on the high suicide-rate in America. But they do not appear to have considered the view of Havelock Ellis, which holds that a high suicide-rate is not merely an accompaniment, but an indication of a high standard of civilization. Failure to notice the work of any but their compatriots is a feature of the book. While we have still much to do in this country, we are not hopelessly behind. We may not possess "psychopathic observation wards," but the remand departments in our larger prisons fulfil much the same purpose. And Dr. Norwood East published some years ago, in this Journal, a study of attempted suicide, based upon a far larger series of cases than is most of the work quoted in this chapter.

Finally, in discussing educational maladjustments, the authors point out that all measures for lessening the amount of anti-social conduct must commence in the schools. It is there that the "problem" child, the child who presents character deviations, can be found, and could be treated. When steps are taken in this direction we shall really be making progress. So far, the most enlightened educational authorities have done little more than the intelligence testing of their children. Such work, excellent as it is, will do but little to help the abnormal children who provide the recruits for our anti-social army.

The problem presented by the anti-social person is an individual one. It can be solved only by the patient, intensive investigation of the individual. It is this fact which we have to stress. It is this work which requires to be expanded. A very large amount of interest is now being taken in this subject, in all parts of the country. It is the task of those who have practical knowledge of the subject to take advantage of this present interest, and so to assist the inauguration of necessary reforms. In this work the present book, with its 137 well selected illustrative cases, should be of great value.

M. HAMBLIN SMITH.

Applied Philosophy. By C. Y. C. DAWBARN, M.A. London : Longmans, Green & Co., 1923. Crown 8vo. Pp. 331. Price 5s. net.

Two notable achievements are accomplished in this volume. The first is the production of 331 pages of print for the establishment of a truism—a feat which even the genius of Euclid never attempted for his axioms. The initial words of the Introduction adduce as the theme of the book the potency of the truism, "Life is not philosophy alone, nor conduct alone; not theory alone, nor facts alone: but the momentum of the two"; and subsequently the author takes up arms in its defence, much in the manner of the knight-errantry of Don Quixote. But, so far as our knowledge goes, no contrary or even slightly divergent opinion as to the duality of life has ever been proclaimed. The duplex nature of life is so obvious that never has the severest form of *cacoëthes scribendi* produced any attack upon the doctrine, and therefore it needs no protagonist on its behalf. Who would not consider a vindication of the axiom, "The whole is greater than a part," to be futile and superfluous, a counterpart of the fruitless labour of Sisyphus?

And, then, the second achievement is the hoisting of the engineer by his own petard. Although a weighty admonition is given in the preface that a top may make a maximum of noise and a minimum of progress, this book, from beginning to end, so far as "Applied Philosophy" is concerned, fulfils the actual rôle of the despised toy. We have most carefully perused the book five or six times in hope of gaining the satisfaction which we anticipated from its attractive title, but we have failed to find much philosophy or any application. The divisions of the index are admirable: (1) Physical science as determinant in life; (2) Ethical Outlook as determinant in life—promise of an intellectual feast! But a *résumé* of Section I will show how grotesque the treatment is. This section contains a paper on the issues of the war written in 1914, a somewhat purposeless essay on "Does talk count?" and an address, "Whither?," delivered in 1919 on the post-war situation, surveying the whole field of politics and sociology. Could anything be more outside the mark in regard to "Physical Science"? *Ex uno omnes disce*. Nearly two-thirds of this book is occupied, under the heading of "Ethical Outlook as Determinant in Life," by an account of the Jews in ancient history—certainly the best written portion and the most coherent. From a carefully drawn history and the terrible doom of the Jewish nation the great truth is deduced that no race, no nation, no family, no man even, can live to self alone, and not deplore it in the end. The concluding four chapters are on "The Ethical Ideal in Creedless Christianity." This ideal is the doctrine of the Fatherhood of God derived from the teaching of our Lord, but apart from any view of Christ's Person. He ranks simply as any other great religious teacher. But it is unreasonable to accept such a doctrine on a purely human testimony. The acceptance of this dogma as an efficient reality demands the authority of its Revealer's Divinity as a guarantee for its reliability and truth. The term "Creedless Christianity" also

is surely a contradiction in terms, for, in the first place, if this dogma is laid down as an article of belief, therein is a veritable Creed, brief though it be; and, secondly, as the foundation of Christianity is the Incarnation of the Son of God, there can be no Christianity without a corresponding Creed.

Many of the sections having been prepared for meetings of various Liverpool Literary Societies are therefore cast in an oratorical form *ad captandum*. But the overwhelming rush of ideas, the singular terseness, ellipses, and frequent obscurity of language, the repeated violations of every canon of grammar, all must have made the lectures as wearisome, confusing, and irritating to hearers as the compilation is to readers. The pity is that the author, though gifted with great power of expression and cogent reasoning, freshness of ideas, and depth of thought, should have published a volume of miscellaneous fragments not *ad rem*; whereas with calmer thought, less impetuosity, and more judgment, he might have offered us a synthetic and really useful work.

EDWARD J. HOCKLY.

Part III.—Epitome of Current Literature.

1. Neurology.

- (1) *Erb's Phenomenon in Epilepsy (Spasmophilic or Tetanic Epilepsy)* [*Das Erbsche Phanomen bei Epilepsie (Hypoparathyeogene, spasmophile oder tetanische Epilepsie)*]. (*Zeitschr. für dieges. Neur. und Psychiat.*, July, 1923.) Römer, Karl.
- (2) *Further Investigations on the Regulation of Neutrality in Epilepsy* [*Fortgesetzte Untersuchungen über die Neutralitätsregulation bei der genuinen Epilepsie*]. (*Ibid.*, May, 1923.) Bisgaard, A., and Norvig, Fohs.
- (3) *The Pathogenesis of Genuine Epilepsy* [*Zur Pathogenese der genuine Epilepsie*]. (*Ibid.*, July, 1923.) Vollmer, Herman.
- (4) *Serum-albumen in the Epileptic Fit, and its Relation to the Blood-pressure* [*Weitere Untersuchungen über den Serum-Eiweiszwert beim epileptischen Krampfanfall und seine Beziehungen zum Blutdruck*]. (*Ibid.*, May, 1923.) Bruhl, Franz.
- (5) *Blood-Chemical Investigations on the Pathology of Epileptic Fits* [*Weitere blutchemische Untersuchungen zur Pathologie des Epileptischen Krampfanfalles*]. (*Ibid.*, July, 1923.) Brühl, Franz.

(1) The author discusses the different views held about the relations between tetany, teething convulsions in children, and epilepsy, and the importance of ascertaining the truth about these relations from the point of view of prognosis and treatment. He set out to investigate the question asked by Curschmann in his monograph on the subject, whether any epileptics show evidence of tetany in hyperexcitability of the neuro-muscular system, as these might be expected to benefit by treatment with calcium and parathyroid, and might have a better prognosis than other forms of epilepsy.

He discusses at some length the significance of the different electrical criteria of tetany grouped under the heading of Erb's phenomenon, and concludes from many tests on normals and epileptics that the diminution of the current required to produce a galvanic response on cathode closure when the motor point—usually of the median nerve—is stimulated is the most reliable sign; if this response occurs below 5 milliampères, and still more if tetanization is obtainable, a positive Erb's phenomenon is present. He advises the testing to be done in the order KCC, ACC, AOC, KOC, as there is a rapid fall in response after galvanic stimulation, and thus he ensures getting the lower values at the most sensitive stage; hence a positive response with the KOC in his estimations is quite definitely positive, and any error made is in the direction of excluding cases near the border which might be positive if the KOC were first tested. The other criteria he finds less reliable and rejects them in the absence of this one. He also looked for Chvostek's and Trousseau's signs of tetany, but found them present in only three cases, and regards their presence as merely signs of a neuropathic constitution.

He found that variations in the Erb phenomenon according to age, sex, diet, bromide and luminal therapy, and to incidence and frequency of attacks were negligible in comparison with the pathological variation between spasmophilic cases and others, whether normal or epileptic.

Taking 250 cases, he found a positive response in 40, *i.e.*, 16 *per cent.* The rather unsatisfactory data at his disposal about the histories of the patients do not show any preponderance among these 16 *per cent.* of a history of teething convulsions. He suggests that these may represent a special type of case among epileptics which has as its basis a defective parathyroid secretion and calcium metabolism, and which is likely to respond to treatment on this basis. He would regard this as a distinct group, and thinks that the failure of calcium and parathyroid therapy in epileptics in general and the varying results obtained are due to a failure to select the right type of case. The presence of a positive Erb phenomenon is an indication for the trial of this therapy; he is not yet able to give information as to its results in his cases.

(2) This paper deals with the results of over a thousand estimations made on 16 epileptics and some normal people and patients with other diseases. It forms part of a series of investigations which the authors are making upon the blood and urine chemistry in epilepsy, some of which has been published in the *Hospitalstidende*, and which is associated with Jarlov's work on the variations of H-ion concentration, which he found was raised before and lowered after an attack. The authors are using Van Slyke's method for determining the alkali reserve in blood-plasma, and intend to publish those results later. The present investigation deals mainly with the urine, and with the ammonia content of the blood.

They improved the technique of Henriques and Christiansen for blood-ammonia estimations by substituting $n/10$ HCl for $n/7$ H_2SO_4 , taking only 10 c.c. of blood, and aerating rather longer and by careful and repeated standardization of reagents, and so reduced experi-

mental error considerably. Normal values are 0.3–0.4 mg. $\text{NH}_3\text{-N}$ in 100 c.c. blood. Two dementia præcox cases showed 0.3 and 0.36.

The epileptics (14 cases) showed variations of all degrees between 0 and 1.42. The high values were all found within about 3 hours before an attack, whether a convulsion or a psychic equivalent, while the low values were never before and always following attacks.

It is to be noted that if blood is kept sterile for about four hours at 37° its ammonia content increases; this increase was to 3–5 times the normal in the cases of dementia præcox, and 7–15 times normal in two epileptics. This is a source of error which must be avoided.

The urea content of the samples of blood was also estimated by the method of Van Slyke and Cullens, and no important variations were found; the lowest values accompanied the lowest ammonia values.

The NH_3 excretion of the urine was investigated by the method of Hasselbach from the point of view of regulation; $\text{NH}_3\text{-}$ estimated by Folin's method, total N by that of Kjeldahl, and the H-ion concentration by electro-metrical method. The normal regulation is very constant, and can be graphically expressed by a regular hyperbola, constant for any individual, but differing for each individual. A given pH (expression of H-ion concentration) should thus correspond to a definite ammonia value (= the percentage of ammonia N of the total N). Under certain abnormal conditions, in pregnancy, diabetes and various endocrine disorders, for instance, this no longer holds; the relation may correspond to a definite curve unlike the normal one, or may not even attain any regularity. The epileptics showed a degree of variation greatly beyond normal limits and enough to make unimportant the error caused by estimation of 24-hourly specimens, and neglecting diurnal variations.

From the authors' findings it was evident that the relation between pH and $\text{NH}_3\text{-N}$ underwent enormous variations, and the results showed clearly that the primary disturbance in epilepsy is an alteration of metabolism of the nature of an alkalosis, and that the disturbances of ammonia regulation are compensatory to these, and merely secondary, even though they may themselves have some toxic effect. The authors at first thought that in epileptics there was no defect of deamidization of the breakdown products of protein metabolism and formation of NH_3 and its compounds, but that a difficulty in synthesizing urea was the chief factor. One surprising result they obtained showed a relatively low urea proportion of the total urine N (16 *per cent.*), and they are still investigating the cause of this, since earlier work showed no great abnormalities in the urine content of creatinine and uric acid. They are therefore inclined to the view that an increase of amino bases in the blood may be the real toxic factor, and that this may be correlated with metabolic errors in conditions of parathyroid defect. They found Chvostek's sign in only one case, Trousseau's in none. They are making further investigations on these subjects.

Their general conclusions are as follows:

- (i) In genuine epilepsy there are constant important irregularities in the metabolism of ammonia, as shown by Hasselbach's method.
- (ii) In the blood, for about three hours before an attack, there is an

increased ammonia content up to three times the normal, and this holds also for psychic equivalents.

(iii) The results suggest a connection between genuine epilepsy and a hypofunctioning of the parathyroid gland.

(iv) Probably epilepsy is a disease *sui generis*, with some specific cause for the parathyroid defect.

(3) After a discussion of the various phases through which research on epilepsy has passed, the author states that he has approached the subject from the point of view of the influence of endocrine disturbance on the disorders of metabolism. In previous work he had found that extracts of thyroid, suprarenal, ovary, pituitary and thymus stimulate metabolism and lessen the excretion in the urine of acid phosphates, acid, ammonia and nitrogen, while parathyroid and testicular extract have the opposite effect. He emphasizes the importance in epileptic metabolism of the changes preceding, rather than those following a fit, since many of the latter are merely the result of the muscular activity.

The normally constant H-ion concentration of the blood ($\text{pH}=7.4$) is maintained by the buffer action of certain salts, mainly carbonates and phosphates, the latter having the usual relationship of 1/7 for the acid primary to the alkaline secondary phosphates. In acidotic conditions tissue metabolism is lowered and more acid intermediate products are formed, while with increased tissue metabolism less acid is formed. To prevent overloading of the blood with acid valencies to a greater extent than the buffer salts can deal with excretion must be effective, and the analysis of excreta thus affords an index of the rate of tissue metabolism. The urine is the most convenient product to investigate clinically. It, like the blood, is a system of buffer salts; its H-ion concentration alone is not sufficient index of tissue metabolism, but the ratio of acid and alkaline phosphates in it does indicate the extent of withdrawal of acid valencies from the blood. If this ratio is the same as that of the blood—1/7—no acid has been withdrawn; but when the ratio of primary phosphates increases, the blood has given up acid valencies. The author has investigated this in epileptics, taking the H-ion concentration by the method of Michaelis (colorimetric), and the phosphates by successive titration against NaOH and HCl. The amount of primary phosphate reckoned to 100 c.c. urine in excess of the normal proportion of 1/7 is taken as the urine acidity in the author's curves. The high acid excretion in acidotic states corresponds to a withdrawal of phosphate from the organism and in alkalotic states the organism is storing phosphates.

The author emphasizes the importance of diurnal variations and of knowing exactly to what period of metabolism the specimen examined corresponds. He has used for his curves only those figures where specimens had been passed in short and regular intervals, with clear separation between the periods preceding and following a fit. The changes found after a fit are similar whether it be one of genuine epileptic, Jacksonian, or hysterical convulsion, and express only the result of muscle activity. Those before the fit are significant. He finds for

the pre-paroxysmal stage quite constantly that there is a progressive decrease of actual and potential acidity in the urine, so that just before the fit there was a very low phosphate excretion, the urine acidity usually = 0, and the H-ion concentration often moved to the alkaline side, and this obtained only for the genuine epileptic cases, not for Jacksonian and hysterical convulsions; the volume passed was also small.

The work of Kersten on blood-sugar was correlated with these observations, since acidotic states and hyperglycæmia are associated, alkalotic with hypoglycæmia, and in epileptics it was found that in the routine investigations a low blood-sugar occurred before the fits, which was increased after the fits. The author showed also an increase of blood-phosphates after a fit, and suggests that hexose-phosphates are stored in the muscles and oppose the hyperglycæmic effects of the acidosis produced by muscle contraction.

Thus it is concluded that the pre-paroxysmal period is characterized by a state of alkalosis.

Vollmer then asks himself wherein lies the difference between epilepsy and tetany; the increase of blood-phosphate and decrease of blood-calcium found in tetany was not found in epileptics before the attack; the increase in phosphate found after the attack is the result of muscle activity; the decrease in phosphate excreted in urine before the attack suggests that phosphate is being retained in the organism, but not in the blood; the author puts forward the hypothesis that it is stored in the muscles.

He then discusses at some length recent work on the chemical changes in muscle during contraction and relaxation, in which phosphate ions play an important part, their increase altering the colloid state of the sarcoplasm and so producing contraction, and also increasing the permeability of the muscle cell-membrane and allowing acid products resulting from contraction to escape into the blood. The heaping up of phosphates in the muscle in the pre-paroxysmal stage is associated with a lowered permeability of the muscle membrane, and the alkalotic state of the blood produces the paradoxical anoxæmia described by Haldane. Thus both the muscles and the nervous system are affected. In the tonic stage of the fit there is increased excitability of the central nervous system due both to anoxæmia and to disionization of calcium owing to withdrawal of phosphate from the blood; together with raised muscle tonus, until the sarcoplasm is saturated with phosphate ions. Then acid breakdown products are formed sufficient to increase the permeability of the muscle membrane, and the removal of these products from the muscle enables it to relax between stimuli, and produces the clonic phase. When the central nervous system is adequately flooded by acid ions, the anoxæmia terminates. The loss of tone of the muscles is the result of impoverishment of the muscles in phosphate. Thus epilepsy is regarded as a periodic variation of metabolism with a progressive alkalosis which is automatically readjusted by the fit. A major fit attains a more complete adjustment than *petit mal* attacks or equivalents, and is usually followed by longer intervals of a relatively normal state.

The author does not regard this metabolic change as the cause of epilepsy, but as the result of some unknown cause of the disease, possibly endocrine in origin, or possibly of unknown ætiology acting through the medium of endocrine disorder.

(4) This is an amplification of previous work published with Meyer in No. 75 of this *Zeitschrift*. The determinations were made by the refractometer method, and comparison of the results by this method with those by Kjeldahl's method showed that while in both normal people and in epileptics without endocrine disorder the difference was only '2 per cent. By the two methods, in epileptics with endocrine disturbance very much larger discrepancies were found. Their former conclusion that a low serum-album content occurred in fits with much muscular activity, and a high content in those with few clonic movements, was not confirmed; this time he found none below normal, and of the six in which high values were found during a fit four had and two had not strong clonic convulsions. Thus he still believes that other factors than muscle activity are acting in the change of serum albumen content; and from the fact that the cases where variable and high values were found also in intervals between the fits were those with endocrine disorder, he concludes that such disorder is the main factor influencing serum albumen content. A hyperthyroid case was the only one which showed no abnormal variations. The blood-pressure findings between and during fits showed no constant changes; in only 3 cases was there a parallelism between serum albumen content and blood-pressure. This is not surprising, since it is changes in capillary pressure which are likely to influence the serum albumen content. In other cases of mental disease examined, again no constant relation was found between mental state and blood-pressure.

(5) Creatinin determinations in blood-serum by the picric acid method, after removal of proteins by trichloroacetic acid, lead to the following conclusions:

- (i) The raised creatinin values found in fits of varying genesis are due to muscle activity.
- (ii) Thyrotoxic influences cause variations of creatinin content.
- (iii) In two cases of Parkinson's syndrome with great muscular rigidity there was no constant rise of creatinin content.

M. R. BARKAS.

- (1) *A Special Action of Pilocarpine in Cerebral Lesions* [*Sopra una speciale azione della pilocarpina in casi di lesione cerebrale*]. (*Riv. sper. di Freniat.*, January, 1923.) Magauda, P.
- (2) *A Peculiar Effect of Pilocarpine in Cerebral Lesions* [*Di una azione singolare della pilocarpina nelle lesioni cerebrali con speciale riferimento ai fenomeni emilaterali nella epilessia*]. (*Ibid.*) Guidi, F.

During the Great War Prof. Besta, of Messina, carried out an investigation into the effects of pilocarpine in head injuries, the results of which were published in the *Riforma Medica* of June, 1921. He found that in lesions of the ascending frontal gyri associated with minor motor disturbances, there occurred after the injection of 2 centi-

grammes ($\frac{1}{8}$ gr.) of pilocarpine hydrochloride, in addition to the sudoral and salivary secretion appearing in normal people, increased tonus, exaggerated reflexes, muscular tremors and spasms on the side of the body opposite to the lesion. The exaggerated tonus usually took the form of tremors and jerkings, but occasionally there appeared movements of a choreo-athetotic type. These phenomena were most intense about twenty minutes after the injection. The neck, face and tongue muscles were affected only in a small number of cases, the arms and legs almost invariably. In a series of 200 cases of head injury these results followed the injection of pilocarpine only when there was injury to the motor zone, never in pure anterior frontal, temporal, occipital, or cerebellar lesions. Similar results were obtained in cases of hemiplegia and hemiparesis, due to organic lesions of the motor tract. In subcortical or capsular lesions the phenomena were more exaggerated and less localized. Cases of paresis following epidemic encephalitis were no exception to the rule. Cases with mixed pyramidal and cerebellar lesions showed exaggeration of the pyramidal lesions only. The preliminary injection of adrenalin or of atropine inhibited the sudoral and salivary secretions, but left the motor phenomena unaffected. Most important of all is the fact that pilocarpine may unmask a slight pyramidal lesion whose symptoms are not apparent by ordinary clinical examination. Progressive conditions have thus been diagnosed in a very early stage.

Dr. Magaudo has repeated the investigations of Prof. Besta and obtained similar results. In addition he has found that epileptics in general tend to show an exaggerated tonus after the injection of pilocarpine, and that this tonus may not always be equal on the two sides. He discusses the possibility of the motor phenomena being due to the vascular action of the drug. Dr. Guidi discovered that in epileptics whose fits begin with unilateral convulsions, the side of the body on which the fits begin shows an increase in tonus with tremors after the injection of pilocarpine, even when the injection is made in a period free from fits. In some epileptics in whom, clinically, there did not appear any sign of pyramidal tract lesion, such signs as an extensor response or a clonus might be produced by pilocarpine. It is clear that we have here a most interesting test which might be applied to cases of mental disorder, showing definite postural abnormalities such as occur in dementia præcox and melancholia. However, it is well to bear in mind that the sweating produced by pilocarpine may be accompanied with a feeling of chilliness and even a slight rigor, producing tremors and an increased tonus which must not be mistaken for the tonic phenomena of a nervous lesion.

W. S. DAWSON.

2. Clinical Psychiatry.

Contributions to the Study of the Circulation in Dementia Præcox
[Contributo allo studio della funzione circolatoria nella demenza precoce]. (Riv. sper. Freniat., January, 1923.) Tiretta, G.

A vast amount of work has been done on the circulatory phenomena of dementia præcox which has been more descriptive than helpful

from the ætiological point of view. The present paper is no exception to the rule. In a previous communication Dr. Tiretta gave his reasons for believing that there was an increase in the peripheral resistance in the circulation, and also an actual insufficiency of blood in these patients. He now reports the results of an investigation into the functional capacity of the blood as ascertained by the method of Varisco. Cardarelli had previously shown that compression of the femoral artery might lead to one of the following syndromes: (1) Rise in blood-pressure and slowing of the pulse; (2) a rise of lesser degree and quickening of the pulse; (3) arrhythmia, bigeminism, or other signs of cardiac disturbance.

Varisco's method is carried out as follows: The patient lies supine for a few minutes, after which the pulse-rate and blood-pressure are estimated. The lower limbs are then raised to an angle of about 110° with the body, and a second estimation of the pulse and blood-pressure is then made. In normal individuals the blood-pressure is raised not less than 5 mm., and the pulse-frequency is either diminished a little or remains stationary, or becomes a little raised. In persons in whom there is circulatory defect the blood-pressure is raised less than 5 mm. or remains unchanged, and the change in pulse-rate shows bigger variations. The results of this procedure are as follows:

Pulse-rate unchanged in 20 *per cent.* normals and 15 *per cent.* D.P's.

"	increased in 20	"	"	"	48	"	"
"	slowed in 60	"	"	"	37	"	"

Blood-pressure.—The maximum pressure was not diminished in either normals or dementia præcox. In 7 *per cent.* of the dementia præcox cases it remained stationary, while in the rest of the normals and dementia præcoces, it was raised. The diastolic pressure was raised in all cases except in 4 *per cent.* of dementia præcox, in whom it was unchanged. The pulse-pressure was found to be increased in all normals, but in only 37 *per cent.* of the dementia præcoces; in 56 *per cent.* it was decreased, and unchanged in 7 *per cent.* In any case the dementia præcox cases with a raised pulse-pressure showed a smaller rise than the normals. The conclusion is that there is a functional incapacity of the circulation in this psychosis, but Dr. Tiretta is unable to state wherein the defect lies. Nolan Lewis, in a recent monograph, has given his reasons for supposing that in dementia præcox there is a congenital hypoplasia of the circulatory system.

W. S. DAWSON.

Study of the Genesis and of the Clinical Features of Five Cases of Hereditary Familial Eunuchoidism [*Studio di genetica e di clinica sopra cinque casi di eunucoïdism eredo-familiare*]. (*Riv. di Pat. nerv. e ment.*, October, 1921.) Furno, Alberto.

A very complete paper which gives a synopsis of the best work that has been done on this subject, before describing most minutely the cases which the author has observed. Photographs of the patients are given, and skiagrams of the sella turcica and of the hands show the various points which are emphasized in the text. From an

intensive study of these cases Dr. Furno arrives at the following conclusions :

(i) There exists a hereditary familial form of eunuchoidism, and it must not be confused with that form which is directly transmitted from father to son ; the latter form is less severe and is really a spurious case of hypogenitalism.

(ii) The hereditary familial form generally follows in transmission the Mendelian Law of crossing a dominant with a recessive heterozygote. The female seems to possess the elements of conduction of the congenital anomaly.

(iii) Among these eunuchoids four distinct clinical forms can be distinguished, and they are classified as follows : (a) pure eunuchoidism, in which there is simply absence or deficiency of the genital gland ; (b) gerodermic eunuchoidism, in which to the congenital hypogenitalism is added the pathological hormonal influence of the thyroid and the pituitary glands ; (c) acromegalic eunuchoidism, in which to the hypogenitalism is added the pathological influence of the pituitary gland only ; (d) feminine eunuchoidism, in which to the congenital hypogenitalism is added the heterosexual influence probably by the product of the secretion of elementary residual ovaries in the body (endocrine hermaphroditism).

(iv) Pure eunuchoidism is consequently a monoglandular syndrome, and the other forms must be looked upon as a pluriglandular syndrome.

(v) The feminine and gerodermic forms of eunuchoidism are not apparent at birth as in the case of the pure form, but only make their appearance at puberty.

(vi) There may exist in eunuchoids some degree of sexual feeling, activated by the central nervous system ; if present it makes its appearance late, and its duration is brief.

(vii) These cases do not all react in the same way to pharmacological tests : the reaction of the sympathetic and autonomic system varies in each case.

(viii) The therapy consists of the transplantation of testicles rich in interstitial substance ; if the transplantations are perfectly successful, the bodily structure and the mental outlook may become almost normal ; if the grafts should not last, they may still, if used early enough, greatly improve the bodily condition.

I. EMSLIE HUTTON.

3. Pathology.

Endocrine Glands and their Anatomical and Pathological Changes in Epilepsy [*Ghiandole a Secrezione interna e loro alterazioni anatomiche e patologiche nella epilessia*]. (*Ann. di Nevrol., fasc., iv-v, 1921.*) Vizioli, Francesco.

Before the author records the changes that he has found in the endocrine glands he gives a compact survey of the principal work that has been done on this subject. Among the earlier workers he quotes Brown Sequard, Starling, Frohlich, Marie, Basedow and Addison, and among later workers Lavastine and Schmiegeld are

specially mentioned. The most important changes that have been observed in the structure and chemical composition of the thyroid are as follows: (1) The presence in the colloid substance of octahedral crystals which have a greater refraction and a different chemical composition than the colloid material; these crystals must be considered without any doubt to be of a protein nature since their reaction to the xantho-protein reaction is so characteristic. (2) The presence in the colloid of crystals of various forms and of inorganic nature, whose reactions show that they are of a calcium compound. (3) The presence among the colloid of another variety which differs in many ways from the normal substance, and which when stained with Nile blue takes a deep blue colour, far more intense than the normal. (4) The presence of yet another variety of colloid which differs from the normal in its staining with sudan III and Delafield's hæmatoxyline. Instead of taking a dark blue colour it stains a bright red yellow, and the author has called it sudanophile. (5) The presence in the lining epithelium of the vesicles and in the colloid of true lipoids which in the normal thyroid is never observed. (6) The presence in the alveolar epithelium of spherical granules which are distinguished by their brown colour, but on whose nature Buscaino will not yet give an opinion; at any rate he can say that the granules are not of a fatty, protein or hydrocarbon nature. (7) The presence sometimes in the interalveolar spaces and in the sudanophile colloid of granulose cells. (8) The presence in the alveolar spaces of granules stained bright red with thionine which the author calls thiophile granules, and which he considers to be of a protein nature. (9) The existence in some thyroids of a true lymphocytic infiltration in the interstitial tissue of the alveolar spaces. Buscaino examined the thyroid in 13 cases of epilepsy, and found in 7 of them chromophile colloid, in 6 protein crystals, in 3 calcium crystals, in 1 lymphocytic infiltration, and in 1 case cellulose granules. Moreover in one case he found great diminution of the colloid and in other two cases a diminution of the fatty substance.

Changes in the parathyroid have been described by Schmiergeld; in some cases he has observed scleroses associated with hypofunction, and in other cases proliferation associated doubtless with hyperfunction. In many cases, however, the glands seemed perfectly normal.

The ovaries of seventeen young epileptic women were examined, and in most of them the condition of the organs was exactly that which is found in women past the period of the menopause. There were very few Graafian follicles and few cicatrices of old follicles.

Changes in the pituitary have been observed, and attention is drawn to the fact that with the epilepsy there is often an associated acromegaly, and also, though rarely, the syndrome of adipso-genitalis. Schmiergeld, in the examination of seventeen pituitaries of epileptics, found that the majority were heavier than the normal; in only three cases did he find sclerosis, and in one case he found a small hæmorrhage with necrosis around it.

Claude, Schmiergeld and Gorriere working separately have brought a good deal of evidence to show that the function of the suprarenals

is diminished. They have described various scleroses, sometimes diffuse and in other cases more limited.

The author is of opinion that the solution of the problem of epilepsy is to be found in the study of the endocrine glands and urges the need for further research.

I. EMSLIE HUTTON.

The Abderhalden Reaction in Mental Disorders.

- (1) [*Weitere Untersuchungsergebnisse mittels des Abderhaldenschen Dialysierverfahrens*]. (*Münch. med. Woch.*, No. 1, 1914.) Wegener, E.
- (2) [*Psychiatrische Erfahrungen mit dem Abderhaldenschen Dialysierverfahren*]. (*Ibid.*, No. 48, 1913.) Maas, S.
- (3) [*Ueber das Abderhaldenschen Dialysierverfahren in der Psychiatrie*]. (*Deutsch. med. Woch.*, No. 42, 1913.) Bundschuh, R., and Roemer, H.
- (4) [*Weitere Untersuchungen mit dem Abderhaldenschen Dialysierverfahren an Geisteskranken*]. (*Ibid.*, No. 44, 1913.) Fischer, J.
- (5) [*Zur Abderhaldenschen Serodiagnostik in der Psychiatrie*]. (*Berlin. klin. Woch.*, No. 47, 1913.) Theobald, M.
- (6) [*Psychiatrisch-interferometrische Studien*]. (*Zeitschr. f. d. ges. Neurol. u. Psychiat.*, May, 1923.) Jacobi, W.

The demonstration by Abderhalden's method of certain ferments in the blood-serum having a specific proteolytic action upon foreign substances had a vogue some years ago, but has since been abandoned in this country. It will be remembered that the method was applied to the sero-diagnosis of pregnancy in the early stages, but the results were not found to be sufficiently accurate. The principle of the technique is to place a measured quantity of the patient's serum and specially prepared substrate (placental tissue, ductless glands, brain, etc.) in a capsule of semi-permeable membrane. If there is a proteolytic ferment in the serum the soluble proteoses and peptones will diffuse through the sides of the capsule into the surrounding fluid, where they may be detected by means of special reagents (ninhydrin, etc.). The method has been widely applied in general medicine to the diagnosis of tumours and diseases of the internal organs. In the sphere of psychiatry Wegener found that in dementia præcox the serum acted upon the genital glands, the thyroid and the brain. Maas confirmed these results, but found that the various forms of dementia præcox did not differ in their reactions. Similar results were obtained by Bundschuh and Roemer, Fischer, and Theobald, with the reservation that the reactions were not always definite, and varied from time to time in the same patient. Several workers have reported discordant results in general paralysis (Mayer, *Münch. med. Woch.*, Nos. 13 and 37, 1914, and Bisgaard, *ibid.*, No. 27, also Fuchs and Freud, *ibid.*, No. 6, 1914). Cotton found that the blood of epileptics gave a positive reaction with adrenal tissue.

Dr. Jacobi has made a most careful study of this reaction, using the polarimeter (Löwe-Zeiss interferometer) as a means of determining the degree of proteolysis. Each test was performed with 0.5 c.c. serum and 5 mgrm. of organ substrate. His object was not so much to determine the presence of a specific ferment in the blood-

serum as to compare its activity with normal controls. He tested sera from normals and psychopaths against the genital glands, pancreas, thyroid, pituitary, adrenals, liver, cerebrum, mid-brain and spinal cord. Normal persons react to the organs of inner secretion, but scarcely at all upon the brain. His results fall into two groups. In the first group, consisting of normals, hysterics and manic-depressives, the serum is less active than in the second group. In mania there is a somewhat increased activity of the anti-thyroid ferment, while the melancholics react rather more strongly than normals upon liver substrate, but the intensity of these reactions is not parallel to the clinical conditions. In the second group are the confusional states, epileptic dements, general paralytics and cases of dementia præcox, which all show greater activity than the first group. Epileptics and general paralytics react strongly upon the cerebrum and mid-brain. In general paralysis there is no relation between the degree of excitement or depression and the reactions towards thyroid and liver. The reactions shown by epileptics are stronger before the fits and less active afterwards. Cases of dementia præcox show the greatest activity towards the sex-glands, but react less strongly towards thyroid and brain. The different varieties do not react in any characteristic manner. As regards differences between the two sexes in both normals and psychopaths there is no specificity, although on the whole males react more strongly to testicular, and females to ovarian substrates. In females there is a general increase of proteolytic activity before the menstrual period.

The method is not sufficiently accurate to enable one to make a differential diagnosis from these serum reactions, or to throw any light upon the course and prognosis of disease, nor has it any application in forensic medicine.

W. S. DAWSON.

- (1) *Life Processes and the Vegetative Nervous System* [*Lebensvorgänge und vegetatives Nervensystem*]. (*Zeitschr. für die ges. Neur. und Psychiat.*, July, 1923.) Müller, L. R.
- (2) *Vegetative Nervous System and Mental Disease* [*Vegetatives Nervensystem und Geistesstörung*]. (*Ibid.*, July, 1923.) Specht, G.
- (3) *Site and Activities of Vegetative Centres in the Mid-brain* [*Lage und Tätigkeit der vegetativen Zentren im Zwischenhirn*]. (*Ibid.*, May, 1923.) Greving, R.

Müller introduces the work of his colleagues by emphasizing the importance of the vegetative nervous system, with its relative autonomy in the systems of ganglia displaced from the central nervous system to the walls of internal organs, its antagonistic functioning, and points out the necessity for the co-ordination of its activities with the life processes of the body as a whole, and the probability that this co-ordination is largely the function of centres in the mid-brain.

Greving describes his own investigations on these centres and his preparations showing their anatomical situation and some of their connections, and points out the extreme difficulty of determining their exact functions, owing to the close juxtaposition of many cell-groups and fibre bundles. He quotes work done by himself and others

which suggests that the corpus subthalamicus is a centre for the smooth musculature of the eye, vaso-constriction, sweating, and bladder constriction; that the tuber cinereum is a centre for regulation of metabolism of carbohydrate, fat, protein, and water, and body heat, while the nucleus paraventricularis also is concerned in sugar metabolism; and these two latter centres are further influenced by tracts from the globus pallidus.

Specht urges further investigation of vegetative disturbances in psychoses, and suggests that they may explain many points hitherto difficult to understand, such as increase of weight and wasting in general paralysis; a paralytic with relatively well-maintained cortico-motor and -psychic functions may die, while one in whom these are greatly impaired may "vegetate" for years. "Life" has its seat in the phylogenetically oldest portions of the brain, and the state of the vegetative centres may explain such cases. In dementia præcox and in post-encephalitic psychoses we may find solutions for mental states in the mid-brain, just as we have learnt to look there for the cause of the motor disorders. The great importance of the vegetative system, which is so closely related to the emotional state and to the life of instinct and impulse, lies in the fact that it gives the clue to the transition between mind and body, and the interrelation between them in the causation of mental disorder. He illustrates this by quoting instances of various forms of mental disease where metabolic and vaso-motor changes can be correlated with alterations of the emotional state.

M. R. BARKAS.

4. Mental Hygiene.

The Mental Hygiene Aspects of Illegitimacy. (*Mental Hygiene*, July, 1921.) Kenworthy, M. E.

The writer here inquires, "What is it, besides the actual sex experience, that leads a girl to indulge in illicit sex relations, and what is it she seeks in choosing this method of expression?" Illicit sex relations as such must be distinguished from sex promiscuity constituting a behaviour tendency, and the writer discusses the question from the latter point of view. Where there exists a definite behaviour tendency there may be conditions in which a pathological state of sex equipment exists, or there may be a lack of normal inhibitions. In the former case there may be derangements of internal secretion, or psychological factors may determine intense sex cravings. Thus there may be difficulties in making adjustments in family life, a sense of inferiority, or seduction by the father or other relatives, all leading to an abnormal expression of the sexual impulse.

Those individuals with an assumedly normal sex development who lack the normal inhibitory equipment belong to a group with a definite pathological basis, but while there is a definite correlation between feeble-mindedness and illicit sex practices, the writer feels that we must be cautious about seeing cause and effect relationships where perhaps only correlation exists. Feeble-mindedness in the problem of unmarried mothers is largely a matter of maladjustment, and the problem with such persons consists largely in care and

protection. Following a discussion of the psychology of the conflict between the sexual impulse and the desire for self-esteem, the writer points out that illegitimacy and prostitution cannot necessarily be classified as conduct in terms suggesting deviation from health. She feels that it is useless to tell a girl not to think of sex when a strong tendency draws her attention continually in this direction. It is necessary to hold out the possibility of the management of these urges, and to explain and help the individual to make the necessary adjustments. The writer advocates an organized effort by the agencies in contact with this problem to create a special centre for the study of the girls under their care, with a well-organized team of workers including a psychiatrist, a psychologist, and a psychiatric worker. Pregnancy itself may be a potent factor for good. The mother should have an unstigmatized opportunity to remain with her child, as a normal outlet for sex hunger is thus provided through the sublimated channels of mother love.

W. J. A. ERSKINE.

Delinquency and Mental Defect. (*The Brit. Journ. of Med. Psychol.*, 1923.) East, W. Norwood.

In this valuable paper Dr. East gives us some results accruing from his large experience at Brixton Prison. It is gratifying to learn that he has found courts to be increasingly willing to utilize the knowledge of experienced medical witnesses, and to allow them to express their views as to the best method of treating some individual offender. This tendency is to be noted in other parts of the country, wherever a prison medical officer of experience is found; and in its extension lies our best hope of the solution of the problems of delinquency. The tendency is even becoming known to the offenders themselves—a fact in which lies, as Dr. East points out, a possible element of danger.

On the proportion of mental defectives to be found among offenders, Dr. East agrees with other writers that the estimates formerly given were too high. He is disposed to regard 5 *per cent.* as a fair estimate. He points out that a certain number of mentally defective offenders cannot be certified as such, owing to the impossibility of proving the existence of the mental defect "from an early age." The suggestion has been made that a legal verdict of "guilty but mentally defective" should be returnable. Dr. East does not approve of this suggestion, and he considers the present plan, under which evidence of mental defect may be accepted and acted upon by the court, when conviction for the offence has been obtained, as preferable. Judging from experience in cases of "legal insanity," it certainly seems undesirable that the practice of arguing these matters before a jury should be extended.

As regards the vexed question of "moral imbecility," Dr. East recognizes the existence of such a condition, but regards it as rare. He holds that many cases of alleged moral imbecility in young people are due to mental conflicts.

On the difficulties of diagnosis which may be occasioned by malin-gering, Dr. East makes most valuable remarks. Indeed we do not recall having seen this question so ably dealt with in so short a space.

He also points out how difficult a problem may be presented by cases of mixed mental deficiency and insanity ; and he gives rules by which, in practice, this problem may be solved.

Dr. East also sends us a reprint of a short paper read by him at the Annual Meeting of the British Medical Association, on the subject of "Mental Deficiency in its Social Aspects." He supplies us with interesting statistics of the numbers of mental defectives found by him among prisoners. And he contrasts these figures with the far larger proportion claimed by certain American observers. He points out that, while cases of certifiable mental deficiency and psychosis are now rationally treated, there is a large group of mental inefficients (subnormals, cases of undeveloped psychosis, psycho-neuroses, etc.) which still remains to be dealt with.

M. HAMBLIN SMITH.

5. Mental Hospital Reports.

Lunacy Division Report for the Year 1922, including the Twenty-eighth Annual Report on the Government Hospital for the Insane at Abbasiya, and the Eleventh Annual Report on the Government Hospital for the Insane at Khanka.

In this report will be found a detailed survey of the Lunacy Administration under the Government of Egypt for 1922.

The accommodation provided continues to fall far short of requirements, and the necessity of discharging numbers of insane cases to the care of relatives (cases which might have benefited by further treatment) is much regretted. As many as 527 cases were thus discharged, and there were 650 cases in residence above the proper establishment.

Against this it is reported that funds have been requested for the construction of a reception house at Alexandria, but it is evident that the unsatisfactory conditions at present existing will not be remedied in the next year or two.

The number of admissions to the Abbasiya and Khanka hospitals for the year was 1,073, or 5 in excess of 1921. In addition to this, 563 cases were admitted to local hospitals under the Department of Public Health, and the total admissions come out slightly less than those of the preceding year.

The death-rate, 7.6 per cent., is the lowest on record in the Egyptian hospitals.

The Directors present full statistical reports for the two Government hospitals. One of the most interesting features of both reports is, again, the incidence of pellagrous insanity and the notably big death-rate from this disease.

There were at Abbasiya 83 pellagrous admissions (36 male and 47 female), and at Khanka 103, the total number of admissions being 460 and 538 respectively.

In regard to this extraordinarily high proportion of cases of pellagra, it should be noted that as in previous years this disease also accounts for the highest mortality at both hospitals from any one cause, viz., Abbasiya, 22 cases, Khanka, 21 cases.

In the report on the Khanka Hospital, which is not signed, comment is made on the regular seasonal incidence of this disease, the greatest number of admissions occurring in May, and the least in December.

It is noted that the numbers are influenced by definite economic conditions amongst the agricultural classes, from whom the majority of the pellagrins are drawn, and that the incidence of pellagra bears a definite relationship to the deficiency of wheat in bread and the use of maize flour alone; in fact the disease becomes prevalent as soon as the maize crop becomes ripe, and decreases as soon as the wheat crop is reaped, and when wheat, therefore, is cheap and in normal years plentiful. Country districts are the most affected, and the incidence of pellagra in Egypt undergoes the usual decrease as the hot weather approaches.

The history of this deficiency disease in Egypt therefore continues to point to maize as the article of diet that is at fault, and indeed pellagra appears to be confined entirely to maize-eaters in Egypt, and is notably prevalent in lean years—that is to say, when maize is likely to be taken more pure and less mixed with wheat or barley.

It is observed that the discovery of pellagra in Egypt was “coincident with the introduction of the *Dent* varieties of maize, and consequent replacing of the *Flint* varieties. The *Dent* varieties, both white and yellow, have large kernels, mature later, and are very apt to be harvested with a high water-content. The variety known as *Flint* have the best keeping qualities because they have a small kernel and mature early.” Even under the most favourable conditions of food and hygiene, pellagra is noted to recur in cases that have already suffered from it.

The incidence of dysentery for the period covered by the reports is satisfactorily low, and it is noted that 35 *per cent.* of the cases suffering from dysentery were already the subjects of bilharziosis. The incidence of the latter disease is particularly striking both amongst the patients and the staff of these hospitals, but it is not a very disabling disease in the majority of cases.

G. F. BARIHAM.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

The usual Quarterly Meeting of the Association was held in the Rooms of the Medical Society of London, 11, Chandos Street, W. 1, on Thursday, November 22, 1923, at 2.45 p.m., the President, Lieut.-Col. E. Goodall, C.B.E., M.D., F.R.C.P., in the Chair.

The Council and Committees met earlier in the day.

MINUTES.

The minutes of the last meeting, having already appeared in the Journal, were taken as read and approved, and duly signed by the Chairman.

OBITUARY.

The late Dr. William Ford Robertson.

The PRESIDENT said that before commencing the business set down on the agenda, there was a very sad duty to perform on behalf of the Association, namely: to refer to the death of their late lamented colleague and friend, Dr. William Ford Robertson. A very good account of his life and work had appeared in the *Journal of Mental Science* just issued. He could not improve upon that, and members would doubtless refer to it for full details. He would like, however, to read to the meeting the obituary notice which appeared in *The Lancet*:

"Dr. William Ford Robertson, who died on July 17, at the age of 56, was a native of Roxburghshire, and received his early education at Daniel Stewart's College and at George Watson's College, Edinburgh. He afterwards joined Edinburgh University, where he graduated M.B., C.M. in 1891, and proceeded to the M.D. degree four years later. He was Resident Physician to the Royal Infirmary and to the Royal Hospital for Sick Children, Edinburgh, as well as Pathologist to the Royal Edinburgh Asylum from 1893 to 1897, when he became Pathologist to the Scottish Asylums, a position which he held till the time of his death. The application of modern pathology to mental conditions was a subject which greatly attracted him, and in 1900 he published the result of his studies in a *Text-book of Pathology in Relation to Mental Diseases*, which proved an interesting addition to the library of those engaged in similar work, though in some respects, owing to a desire to put forward constructional views as early as possible, it was lacking in completeness. It was not till twenty-one years later that he published his well-known book on *Therapeutic Immunisation in Asylum and General Practice*, a work which advanced views in many directions controversial, but which at the same time gave much food for thought. He was ever distressed at the difficulty of preventing mental disease in the present state of knowledge, and his book is a valiant attempt to solve this problem. It covers ground which has still to be tested, and, indeed, Dr. Robertson admitted that 'numerous facts new to science are recorded and many heterodox opinions are expressed which are not likely to be accepted without a fight.' It was Dr. Ford Robertson who translated Tanzi's *Text-book of Mental Diseases*, one of the best presentations of the science of psychiatry of its date (1909). He will be remembered as one of those who strove constantly to correlate mental and physical disease, and who succeeded at any rate in stimulating others to further research on these lines."

From Prof. G. M. Robertson, his predecessor in the Chair, he, the speaker, had learned that Ford Robertson on his death-bed was proposing to translate the last edition of Tanzi, and arrangements had been made to obtain a sum of money for that purpose. That illustrated one of the outstanding traits of the deceased, *i.e.*, his extreme enthusiasm and optimism, even when on his death-bed. The President felt that in Dr. Ford Robertson the Association had lost one of great originality of mind, one who was greatly interested in promoting knowledge in the science of psychiatry, and one who had the power of communicating his enthusiasm to others. He held many views which were undoubtedly controversial, but his splendid optimism and keenness, and his ability to get others to work, constituted a real force in the specialty. And in his private capacity, all would agree, he was kindly, sympathetic, gentle, and a good friend. He was sure members would desire him to express their sympathy with Mrs. Ford Robertson and other members of the family.

Members present signified their deep regret by rising in their places.

MATTERS ARISING OUT OF THE COUNCIL MEETING.

The PRESIDENT announced that at the Council Meeting which had just been held a matter was discussed and a decision come to which it was necessary to communicate to the general meeting. It concerned the attitude of the Association towards the proposals of the General Nursing Council with regard to the training of mental nurses. Members were well acquainted with the attitude of the General Nursing Council on this question, and the attitude this Association should take towards that Council's proposals was of the highest importance. Briefly stated, there was a proposition that a deputation of members of the General Nursing Council should meet delegates appointed by this Association to discuss a *modus*

vivendi with regard to the training and the examination of mental nurses. The subject was one of great complexity and difficulty, and it would need considerable tact and patience to come to a wise decision. The Council of this Association had felt that, if members generally were agreeable, it would be best to have a special meeting of the Council, to appoint six delegates to represent the Association's views. He asked whether this meeting would authorize the Council to proceed in the manner suggested.

Dr. A. N. Boycott asked if it would be possible for members outside the Council, who were intensely interested in this subject, to be informed of the views of the Council.

The PRESIDENT replied that the delegates of the Association would report after the contemplated conference to the Council, and the Council would report to a general meeting. It was not proposed to bind the Association in any way without the general body of members' consent. In further answer to Dr. Boycott, the President stated that the Council had taken up the attitude that the Association should continue its examinations.

The suggestion was agreed to.

The PRESIDENT said the Education Committee were issuing further instructions as to the conduct of their examinations, covering the alterations rendered necessary by the abolition of the Intermediate Examination, and the representation of the nursing profession at the Nursing Examinations, etc. He also announced that there was a Conference of several interested bodies being held, to which the Medico-Psychological Association had appointed delegates, with regard to the emendation of the Asylums Officers' Superannuation Act.

ELECTION OF CANDIDATES AS ORDINARY MEMBERS.

The PRESIDENT appointed Lt.-Col. J. R. Lord and Dr. R. Percy Smith scrutineers of the ballot.

The candidates were all elected as follows :

SHEPHERD, CHARLES ERNEST ALAN, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, Long Grove Mental Hospital, Epsom, Surrey.

Proposed by Drs. D. Ogilvy, J. E. Martin, and E. G. T. Poynder.

LOVELL, CLEMENT, M.D., B.S.Lond., Pathologist to the Royal Court of the Bridewell and Bethlem Hospitals ; The Laboratory, Bethlem Royal Hospital, Lambeth, S.E. 1.

Proposed by Drs. J. G. Porter Phillips, Thos. Beaton, and Macpherson Lawrie.

GOLLA, FREDERICK LUCIEN, M.A., M.B., B.Ch.Oxon., F.R.C.P., Director of the Laboratory and Pathologist to the London County Mental Hospitals, The Maudsley Hospital, Denmark Hill, S.E. 5 ; The Dene, Sunninghill.

Proposed by Drs. C. Hubert Bond, Edward Mapother and Sir Frederick Mott.

NORONHA, FRANK, M.B., C.M.Madras, D.P.M., Superintendent, The Asylum, Avenue Road, Bangalore City, India.

Proposed by Sir Frederick Mott, Drs. G. Warwick Smith, and R. Worth.

MINSKI, LOUIS, M.B., B.S.Durh., Assistant Medical Officer, Bootham Park, York.

Proposed by Drs. G. Rutherford Jeffrey, H. Yellowlees, and J. R. Gilmour.

AN ADDRESS.

"Psychiatric and Neurological Teaching at the Dutch Universities, especially at the University of Utrecht," by Prof. D. C. Winkler, of the Psychiatric-Neurologic Clinic, Utrecht.

The PRESIDENT said it afforded him the greatest pleasure to introduce to the meeting Prof. D. C. Winkler, of the Psycho-Neurological Clinic at Utrecht. He wrote to that gentleman in June last, hoping he might be able to come over to the Association's Annual Meeting, and he would have come but for the fact that he had made other arrangements. Prof. Winkler had, however, taken this opportunity of coming, and members would feel extremely indebted to him for having done so at this inclement time of the year, and especially as he had chosen to address the Association on a matter of much importance at this juncture, when it was hoped that clinics for early treatment would at last be started in this country. The Utrecht Clinic was only opened in 1913, and probably it was the finest of its kind in Europe. He believed there was nothing approaching it anywhere except

in the United States, namely, the Boston Psychopathic Hospital. In the name of the Association he extended to Prof. Winkler a hearty welcome.

Prof. WINKLER was cordially received, and his address will be published in due course in the Journal. He illustrated his remarks by photographs and plans thrown on the screen.

At its conclusion the PRESIDENT said that to-day's meeting, apart from business matters, was to be devoted to the hearing of this address, and it would be agreed that it was quite unnecessary to have any other subject on the agenda. At this late hour it would not be possible to adequately discuss the subject. He wished in the first place to congratulate Prof. Winkler on his great control of the English language, and secondly, to thank him for his great kindness in coming over to speak to them on the subject as he had. He felt rather humiliated at the position of our own country in this matter. Here was a distinguished gentleman, coming from what people were pleased to call one of the small Powers, who was able to put before the Association an achievement of this kind, and to show the high level on which psychiatry stood in Holland in comparison with a great nation like our own. Prof. Winkler truly said that psychiatry could not be taught in mental hospitals. Some experts in this country had been saying that for the past thirty years. He congratulated the Professor on the success which had attended his persevering efforts, and on the fact that he and his colleagues had lived to enjoy the fruition of their labours. He moved a most cordial vote of thanks to him for his address.

Sir FREDERICK MOTT said he esteemed it a great privilege to have been asked to second a vote of thanks to Prof. Winkler. He had listened to the address with great interest, all the greater, perhaps, because he had the opportunity, last year, of visiting Holland for the purpose of giving a lecture at Utrecht, and of seeing the very fine institution of which the Professor is the Director. When he returned, he told Dr. Mapother and the other officers at the Maudsley Hospital that they ought to go over there and see how such a hospital and clinic should be carried on. They went, and came back in possession of very valuable information.

The President had referred to the high standard aimed at in Holland in matters of education. He, Sir Frederick, was reminded of the fact that when William of Orange rode into Leyden after the siege, he asked the burghers which they would choose, a University or a remission of taxation, and they chose a University. He wondered whether there was a city or town in this country which would make a similar choice under the circumstances! When he had the privilege of lecturing in the theatre which had been shown on the screen, what struck him was the very keen interest of the students, and the facilities they had for learning, which we in this country did not possess. He thought the correlation of the university with all medical education was one of the greatest advantages which could possibly obtain, and if it were carried out in this country it would be a good thing, both for research and for the ordinary curriculum.

One thing he would like to ask Prof. Winkler was the following: Had every student in Holland to pass a State examination before he took his doctor's degree? He asked because in this country there were so many portals and different stages. It had always seemed to him it would be a very good provision if we in this country had one portal for examination for registration. Degrees could be given by the universities. But he recognized there were many difficulties in the way of that.

It gave him very great pleasure indeed to second this vote of thanks.

The resolution was carried by acclamation.

Prof. WINKLER, in reply, said there was not a State examination, but it must not be forgotten that they now had a 7½ years' course. After two years of medical education students had their first examination, namely, in physics, chemistry, biology, etc.; then they had physiology and anatomy, and after four years they entered the clinic, and it was another two years before they came to the wards. They advanced still another stage in the hospital, and then, if they wished, they could come to the clinic and be a house-physician. Though they had not the remuneration paid in England, they were comparatively well paid, and their allowances were equal to £80 to £100 a year. They might remain as house-physicians for three years, and after that they could go to the asylum for further study and experience. After the final examination there was not a State examination, and while matters remained in Holland as now, he did not think such would be necessary.

DINNER.

A Dinner was held in the evening, in honour of Prof. Winkler, at the Langham Hotel, Portland Place, W., at which there was a good attendance of members and guests.

SOUTH-EASTERN DIVISION.

THE AUTUMN MEETING of the South-Eastern Division was held by the courtesy of Dr. E. S. Pasmore, Medical Superintendent and the Committee of Visitors at the Croydon Mental Hospital, Warlingham Park, Upper Warlingham, on Tuesday, October 9, 1923.

Among the visitors present were: The Rt. Hon. Lord Sandhurst, Sir R. W. Walden, C.B.E., Col. Ffrench, Col. Sleeman, Ald. J. G. Allan, D.L., J. P., Ald. J. T. Trumble, J.P., Councillor Dr. Owen Fowler, J.P., Councillor J. E. Fox, J.P., T.D., Councillor Jarvis, Councillor W. B. Robarts, Drs. Percy Allan, Hammond, McGuire, Newby, Newsholme, Sidney Owen, H. W. Phillips, Pollock, A. Rose, Sibley, Russell Thomas, Tripe, Vicar of Croydon, Rev. Reid, Rev. H. M. Scott, E. G. Field, Esq., H. Howard, Esq., J. M. Newnham, Esq., D.L., LL.D.

After an inspection of the Hospital and grounds, the members were invited to lunch in the Recreation Hall.

At the ensuing General Meeting Dr. J. Chambers took the Chair.

The minutes of the last meeting, having appeared in the Journal, were taken as read, and were confirmed and signed by the Chairman.

The following candidate was elected as an ordinary member:

EDMUND DUNCAN TRANCHELL HAYES, B.A., M.D., B.Ch.Dubl. D.P.M.,
Assistant Medical Officer, Croydon Mental Hospital.

Proposed by Dr. H. M. Berncastle, E. S. Pasmore and J. Noel Sergeant.

Dr. E. D. T. HAYES read a paper, "Some Aspects of Dementia Præcox." The CHAIRMAN initiated a short discussion, in which Drs. A. HELEN BOYLE, F. H. EDWARDS and H. J. NORMAN took part. Dr. HAYES replied.

The kind invitation of Dr. H. WOLSELEY-LEWIS to the Division to hold the Spring Meeting at Barming Heath, on Wednesday, April 30, 1924, was accepted with acclamation.

After a further inspection of the Hospital and grounds the members were entertained to tea, which concluded this agreeable and instructive meeting.

SOUTH-WESTERN DIVISION.

THE AUTUMN MEETING of the Division was held by the kind invitation of Dr. R. Eager and the Committee of Visitors at the Devon County Mental Hospital, Exminster, on Thursday, October 25, 1923.

Major Kitson (Chairman of the Visiting Committee), the Mayor of Exeter (Mr. P. F. Rowsell), Rev. Elliott, Mr. Russell Coombe, Mr. Lock, Drs. Gordon, Roper, Bryant, Somerville and Stirk were present as visitors.

Dr. R. Eager was voted to the Chair, and the minutes of the last meeting were confirmed and signed by the Chairman.

Dr. W. Starkey was nominated as Hon. Divisional Secretary.

Drs. R. Eager and N. R. Phillips were nominated as representative members of Council.

The following candidate was elected as an ordinary member:

SOMERVILLE, GEORGE, M.B., Ch.B.Edin., Assistant Medical Officer, Devon County Mental Hospital, Exminster.

Proposed by Drs. R. Eager, C. F. Bainbridge, and W. Starkey.

The date of the Spring Meeting was fixed for either April 24 or 25, 1924, and its place of meeting was left in the hands of the Hon. Secretary to arrange.

Dr. E. BARTON WHITE read a short paper on *A Case of Cerebral Syphilis*, which was discussed by Drs. R. EAGER, G. E. PEACHELL and W. STARKEY.

Dr. R. EAGER then opened a discussion on *The Early Treatment of Mental Disorders*, and Dr. PEACHELL read an account of a rural out-patient clinic as in operation in Dorset. The discussion that followed was taken part in by Drs. ROPER, MCKINLEY REID and W. STARKEY.

The following resolution was passed and a copy ordered to be sent to the Minister of Health :

"That, in the opinion of this Meeting, it is of the utmost importance that the Mental Treatment Bill should become law as soon as possible, as the absence of the facilities which it provides seriously hampers the prompt treatment of incipient mental disorder."

During the morning members and visitors were afforded the opportunity of inspecting the wards, workshops and pathological laboratory. Dr. EAGER demonstrated a series of cases of Huntingdon's chorea, and other cases of interest were shown by members of the staff. Members and visitors were most hospitably entertained to lunch, at which the Chairman of the Visiting Committee presided, and tea was kindly provided at the conclusion of the meeting.

A hearty vote of thanks was accorded to Dr. Eager and the members of the Visiting Committee for their hospitality and the provision of a most interesting day's programme.

NORTHERN AND MIDLAND DIVISION.

THE AUTUMN MEETING of the Northern and Midland Division was held at the East Riding Mental Hospital, at Beverley, by the courtesy of Dr. E. S. Simpson, who entertained the meeting to lunch, on Thursday, October 25, 1923.

Dr. E. S. Simpson occupied the Chair.

The minutes of the last meeting were read and confirmed and signed by the Chairman.

Drs. T. S. Adair, E. C. Mould and Bedford Pierce were re-elected members of the Divisional Committee for the ensuing year.

The following candidate was balloted for as an ordinary member of the Association and was duly elected :

SYDNEY FRANCIS MARWOOD, M.B., B.S.Lond., M.R.C.S., L.R.C.P., Assistant Medical Officer, South Yorkshire Asylum, Sheffield.

Proposed by Drs. W. J. N. Vincent, J. M. Mathieson and F. Back.

Dr. J. E. MIDDLEMISS (Leeds) read a paper on "Mental Trends and Mechanisms and their Relation to Disease Considered in their More Familiar Manifestations."

The paper gave rise to an interesting discussion, in which Drs. D. YELLOWLEES, G. R. JEFFREY, BEDFORD PIERCE and O'CONOR DONELAN took part, and Dr. MIDDLEMISS replied. (This paper will appear in the Journal in due course.—Eds.)

Dr. M. A. ARCHDALE then read a paper on "The Token-Reward System in Mental Hospitals." He gave a very interesting account of the introduction, development and results of a system of token-rewards which he had used at the Cambridge Mental Hospital. The value, distribution and purchasing power of the system were all described.

This paper gave rise to a prolonged discussion which was taken part in by most of those present.

Dr. SIMPSON showed a case for diagnosis—a married woman, æt. 56, showing great hypertrophy of the cranial bones, particularly the temporal parietal and occipital; the frontal was only slightly affected. There was no enlargement of the facial bones.

The mental condition was one of progressive dementia with confusion, slight exaltation, great loss of memory for recent events.

The cranial measurements were as follows: Circumference 24 in. Nasal notch toinion 14 in. Ear to ear over vertex 16 in. There was slight ptosis of right eye. Traces of left facial paralysis. Flaccid paraplegia of lower limbs with loss of bladder and rectal control. Sensation to temperature, touch and pain very little impaired. Headache constant but varying in intensity. Dr. Simpson suggested that all the symptoms, both mental and physical, had a common origin, namely pressure of the hypertrophied cranium on the brain as a whole. His diagnosis of the condition was "leontiasis ossea."

The members present displayed much interest in the condition, but did not venture on any diagnosis.

This concluded the meeting.

SCOTTISH DIVISION.

THE AUTUMN MEETING of the Scottish Division was held in the Royal College of Physicians, Queen Street, Edinburgh, on Friday, November 16, 1923.

The CHAIRMAN (Prof. G. M. Robertson) referred to the death of Mr. T. W. L. Spence, Secretary from 1888 to 1911 of the General Board of Lunacy in Scotland. Though Mr. Spence was not a member of the Association, he had for many years played such an important part in the care and management of the insane that all would mourn his loss. His official duties had brought him into close contact with members of the Division, who learned to admire his unfailing courtesy and kindness, his accuracy, and his knowledge of the laws, which was unsurpassed. It was unanimously resolved that it be recorded in the minutes that the Members of the Scottish Division of the Medico-Psychological Association desire to express their deep sense of the loss sustained by the death of Mr. Spence, and their sympathy with the members of his family in their bereavement, and the Secretary was instructed to transmit an excerpt of the minute to the relatives.

The CHAIRMAN then feelingly referred to the great loss which the Association and the specialty of psychiatry had sustained by the untimely death of Dr. William Ford Robertson, Pathologist, since its inception twenty-six years ago, of the Scottish Asylums' Research Laboratory. Dr. Ford Robertson had devoted his life to the investigation of the pathology of mental disease, especially in relation to bacterial and other infections, and to the treatment of disease by vaccines. He had also made important contributions to the ætiology of cancer. He had an active and original mind, wide vision, indefatigable industry, unbounded enthusiasm, and a courage and optimism that no difficulties could overwhelm. It was unanimously resolved that it be recorded in the minutes that the Members of the Scottish Division of the Medico-Psychological Association desire to express their deep sense of the loss sustained by the death of Dr. Ford Robertson, and their sympathy with the members of his family in their bereavement, and the Secretary was instructed to send an excerpt of the minute to Mrs. Ford Robertson.

The SECRETARY submitted a letter of acknowledgment from Mrs. D. G. Thomson and family, thanking the Members of the Division for their kind letter of sympathy.

The Business Committee was appointed, consisting of the nominated member of Council, the two Representative Members of Council, along with Dr. R. B. Campbell, Dr. W. McAllister, and the Divisional Secretary.

Dr. W. D. Chambers and Dr. C. J. Shaw were nominated by the Division for the position of Representative Members of Council, and Dr. Wm. M. Buchanan was nominated for the position of Divisional Secretary.

The following candidate, after ballot, was admitted an ordinary member of the Association :

CRAIGIE, JAMES, M.B., Ch.B.St.And., Assistant Medical Officer, James Murray's Royal Asylum, Perth.

Proposed by Drs. Chambers, Kerr and Buchanan.

With regard to the Division's amendments to the Asylums Officers' Superannuation Act, the SECRETARY reported that a conference of representatives of interested organizations was at present sitting in London, considering in what direction amendments can be made to that Act. The Medico-Psychological Association was fully represented at this conference. The conference had not yet completed its labours, but when its draft amendments were prepared, it was proposed to submit these to the respective organizations.

Dr. D. K. HENDERSON moved "That in future the Divisional Meetings of the Scottish Division of the Medico-Psychological Association be held in mental hospitals in varying parts of the country, and that these meetings be of a whole-day nature, so that adequate time is provided for the discussion of both business and scientific subjects." Speaking in support of this motion Dr. Henderson offered the opinion that the present afternoon Divisional meetings held twice a year, and usually in a hall in Edinburgh or Glasgow, were very largely occupied with questions of business, and that sufficient time could not be devoted to the scientific and clinical aspects of our work. He did not wish to belittle the importance of the business side of our meetings, but argued that were these meetings of a whole-day character, ample time would be given for both sides. He felt, too, it was a little unfair to members resident in the north and south that they should always be asked to travel to Edinburgh or Glasgow. In illustration of his remarks,

he spoke of the method of inter-hospital conferences in the United States, pointing out the medical administrative, and social advantages of such a system. Dr. J. H. MacDONALD seconded the motion, and after Dr. T. C. MACKENZIE, Dr. DONALD Ross, Sir H. ARTHUR ROSE, Dr. R. MARY BARCLAY, and Prof. ROBERTSON had spoken in support, the motion was unanimously agreed to, and the Secretary was instructed to arrange in future accordingly.

A vote of thanks to the Chairman terminated the business of the meeting.

IRISH DIVISION.

THE AUTUMN MEETING of the Irish Division was held at the Royal College of Physicians, Kildare Street, Dublin, on Thursday, November 1, 1923, Dr. M. J. Nolan in the Chair.

The minutes of the previous meeting were read and signed by the Chairman.

Letters in connection with the registration of mental nurses were read, and telegrams received from Dr. J. O'C. Donelan and others were considered by the meeting.

The correspondence regarding the Asylums Officers' Superannuation Act was read, and the report of Dr. J. O'C. Donelan and Dr. P. O'Doherty, appointed at the last meeting of the Division to deal with this important matter, was read and considered.

It was decided that no further action should be taken at present, pending the introduction of the amending Bill in the Parliament of Southern Ireland.

On a ballot being taken the following were elected ordinary members :

McCARTHY, Dr. OWEN FELIX, Resident Medical Superintendent of Cork District Mental Hospital.

Proposed by Drs. M. J. Nolan, O'Connor Donelan and R. R. Leeper.

FITZGERALD, Dr. JOHN J., Assistant Medical Officer, Cork District Mental Hospital.

Proposed by Drs. M. J. Nolan, O'Connor Donelan and H. R. C. Rutherford.

The meeting next considered the present position as regards the registration of mental nurses by the General Nursing Council in respect of Ireland, particularly in respect of those nurses who, although uncertificated by the Association, were eligible for registration, having been for three years in active practice as mental nurses before the specified date fixed by the General Nursing Council.

The meeting considered that it was in the proper discretion of the Medical Superintendents to give a certificate to these nurses who were really engaged in the treatment of insane cases during the specified period, so as to enable them to go upon the Register.

The meeting next discussed the desirability of assistant medical officers in Ireland obtaining a special qualification in mental disease, and it was unanimously decided that the Certificate of the Association was eminently suitable as a qualification, being a certificate granted by examination by experienced physicians and superintendents of mental hospitals; and candidates for the certificate must always be physicians engaged for a specific period in the active treatment of mental disease before they are permitted to sit for the examination.

The Hon. Secretary was directed by the meeting to have printed and issued a circular to medical men practising as physicians in Irish mental hospitals, calling their attention to the desirability of their joining the Medico-Psychological Association, and thereby contributing by their clinical, pathological and therapeutical knowledge and experience to the advancement of psychological medicine in this country.

This terminated the proceedings.

EDUCATIONAL NOTES.

*London County Council.—The Maudsley Hospital, Denmark Hill, S.E. 5.—*We understand that Sir Frederick Mott will continue to direct the course of lectures and practical instruction for the Diploma in Psychological Medicine at the Maudsley Hospital. The seventh course will commence on Monday, January 21, 1924.

Part I.—(1) Eight Lectures on the Anatomy of the Nervous System. By Sir Frederick Mott, K.B.E., M.D., LL.D., F.R.S., F.R.C.P., on Mondays at 2.30 p.m., commencing on January 21, 1924.

Practical Instruction and Demonstrations.—Methods of staining nervous tissue and preparing it for microscopical examination; the living nerve cell—the nerve fibre; degeneration and regeneration of nerves; distribution of sections, illustrating the principal diseases of the nervous system, for mounting as a permanent collection.

(2) Eight Lectures on the Physiology of the Nervous System. By F. Golla, M.D., F.R.C.P., on Fridays at 2.30 p.m., commencing on January 25, 1924.

Practical Instruction and Demonstrations.—Physiological Chemistry: Chemistry of the nervous system, and cerebro-spinal fluid; metabolism; vitamins and food deficiency; physico-chemical methods as applied to bio-chemical research; blood and urine analysis—acidosis, uræmia, uric acid. Practical Physiology: Physical concomitants of emotion; recording reflexes and tremors in man; action of drugs on autonomic system; the study of reflex action in the spinal animal.

(3) Eight Lectures on Psychology. By Henry Devine, M.D., F.R.C.P., on Thursdays at 2.30 p.m., commencing on January 24, 1924.

Practical Instruction and Demonstration.—Sensation; psycho-physical methods; statistical methods; reaction times; association; memory; intelligence tests; muscular and mental work.

An announcement regarding Part II will follow.

Fees: For the whole course of Part I and II, £15 15s.; for Part I separately, £10 10s.; for Part II separately, £10 10s.; for one single series of Lectures in Part I, £4 4s.; for one single series of Lectures in Part II, £2 2s.

Enquiries as to Lectures, etc., should be addressed to "The Director of the Course in Psychological Medicine, Pathological Laboratory, Maudsley Hospital, Denmark Hill, S.E."

Bethlem Royal Hospital, S.E. 1.—A course of lectures and practical instruction for the Diploma in Psychological Medicine granted by the various universities is given at Bethlem Royal Hospital twice yearly during the spring and autumn.

The next course, which will begin on January 14, 1924, will conclude in April, and is divided into two parts—A and B. Part A deals with the anatomy, histology and physiology of the nervous system and psychology, and Part B consists of lectures and demonstrations of neurology, psychological medicine and mental deficiency. The fees for both parts of these lectures and demonstrations are 15 guineas, or 10 guineas for Part A or Part B separately.

Clinical instruction in psychological medicine is given at Bethlem Royal Hospital every morning (except Wednesdays) at 11 a.m. The fee for post-graduates is 5 guineas for three months, but a reduction is made to those who attend the course for the Diploma in Psychological Medicine.

University of London.—A course of three lectures on Psychology will be given at University College, Gower Street, W.C. 1, by Professor Morton Prince, M.D., LL.D. (of Tufts College Medical School, Boston, Mass., U.S.A.), at 5.30 p.m. on Monday, February 4th, Wednesday, February 6th, and Thursday, February 7th.

Admission to these lectures is free.

ROYAL ALBERT INSTITUTION, LANCASTER.

ANNUAL GENERAL MEETING, SEPTEMBER 28, 1923.

Address given by

Sir FREDERICK W. MOTT, K.B.E., M.D., LL.D., F.R.S., F.R.C.P.

It is a great pleasure to me to be here to-day. I have read with much interest the admirable Annual Report of your Superintendent, Dr. W. H. Coupland, and after seeing for myself the institution, and the work it carries on in the care and treatment of mental defectives, I am able to endorse the excellent report made by the Commissioners of the Board of Control as a result of their visit on May 25 last. Lord Beaconsfield once said: "The health of the people is really the foundation upon which all their happiness and all their powers as a nation depend; but if the population of that country is stationary or yearly diminished in stature

and strength, that country is doomed." We now realize that to this wise saying might be added the fact that mental inferiority counts for as much as physical inferiority in the struggle for existence by a civilized nation. During the great war the nation lost the flower of its youth; its A1 class perished, while the C3 class, owing to physical or mental inferiority, or both combined, was preserved. This fact should cause every thinking man who has foresight to seriously regard the peril which awaits the nation if it does not make every individual and collective effort to combat the increase in the numbers of the C3 class, and of mental defectives, and foster the increase of the A1 class. A long view as regards the economics of the situation is necessary. It is not only the duty of the State through the Ministry of Health, but it is also the business of every individual of civic worth, by his conduct and social influence and political interest, to avert this national peril. How can this be done?

Firstly, we must ascertain to what extent does mental deficiency exist in the population. Secondly, we should endeavour to ascertain the principal extrinsic and intrinsic factors underlying its causation and prevalence in the various grades of society. Thirdly, how the causes can be mitigated or prevented by social improvements, suitable education, and legislation, and the best means from an economic and altruistic point of view of segregating and taking care of mentally defective children in institutions, and of preventing them from breeding.

In respect to the first question, the report of the Royal Commission upon the Care and Control of the Feeble-minded, published in 1908, stated that 1 in 238 of the population was mentally defective.

This figure is based upon insufficient data, for it only takes into account the inmates of institutions, workhouses, colonies, prisons and rescue homes, where social failures are collected, persons of little or no civic worth, and unable to compete with their fellows in a legitimate way in the struggle for existence. It takes no account of those at home, or of those belonging to the floating, vagrant, and the criminal class. It has been calculated that 1 in 18 of the inmates of workhouses is feeble-minded. Probably the total number of defectives referred to in the report of the Royal Commission as being 149,428 is much too low a figure. This included 35,662 feeble-minded children, which were part of the 66,309 defectives inadequately cared for.

The report of the Medical Officer of the Board of Education for 1921 states that there are 31,800 feeble-minded, 3,000 imbeciles, and 1,000 idiots. This is also probably a very conservative estimate.

I have for many years been interested in the study of heredity as a cause of insanity and mental deficiency. But inasmuch as mental defectives, idiots and imbeciles were not admitted to the London County Mental Hospitals, I only had indirect evidence of the close association of mental deficiency with certain types of insanity in the large numbers of pedigrees of insane patients which I constructed, or had constructed for me, from very carefully collected data. In 1915 I induced the Board of Control to grant a sum of money for the purposes of research in heredity in relation to mental deficiency and insanity. To Miss Kelley, who had previously undertaken a research in Haggerston for me, a conscientious and trained social worker, by no means unfamiliar with the subject, through having worked with me for years, was entrusted the task of comparing the intrinsic and extrinsic factors (nature and nurture) of sixty unselected children from three normal schools with sixty from three special schools in Bethnal Green, and these data were compared with the data obtained concerning sixty inmates of Claybury Mental Hospital. The inquiry was as complete as it could be made. The school teachers, the school doctor, the relieving officer, charity organizations, infirmary doctors and superintendents of asylums all co-operated in affording information, so that the data upon which the inferences were drawn might be as reliable as possible. Moreover, Miss Kelley visited the homes and interviewed the parents or relatives and friends—a task requiring much tact and consideration. The results of this inquiry were published in the report of the Board of Control for the year 1916, and undoubtedly they show the truth of the generally accepted opinion that "Like tends to beget like."

A comparison of the wage-earning capacity, continuance of employment, condition of the home and the intelligence of the mother showed a marked contrast in the case of the history of the nature and nurture of the normal children and those of the special schools. The father in the case of the former was usually

earning good wages, or fairly good wages, and in continuous employment, and a good number were skilled artisans; whereas the fathers of defective children were mostly either casual workers, hawkers or unemployed. But very few were in continuous employment, and could rarely be graded as A1 in their occupation.

The homes of the former were generally clean and the mother intelligent, whereas in the latter the homes were generally poverty-stricken and dirty, although not always. The parents of the feeble-minded children were known generally to the relieving officer, and were frequently admitted to the workhouse, the infirmary, or they had received outdoor relief. The histories of the sixty families in which a member was in an asylum, showed that the home conditions, the occupational capacity and the civic worth generally of the stock was on the whole far superior to that of the stock from which the mental defective came. Still, pedigrees show that the two stocks are interrelated, though in precisely what manner is frequently not ascertainable. There can be no doubt, however, that a stock with insanity or epilepsy occurring in its members may have mental defective members also. But it very frequently exhibits among its members genius of the creative imaginative type, eccentricity, and a disposition to break away from traditional social conventions, customs and usages, and in that the stock may be of great service to the nation. Many cases of the primary dementia of adolescence (*dementia præcox*) occur in congenital imbeciles; in others the symptoms are first manifest in childhood, and they are then termed imbeciles. This primary dementia is a genetic inadequacy in which probably all the organs and tissues of the body have a lack of vital energy.

The lower we sink in the social scale, the more prevalent must be mental deficiency, because endowed with a feeble mentality, they are unable to compete with their fellows in the struggle for existence; they necessarily are driven into the casual, meaner and less skilled occupations, or crime. Still, mental deficiency, imbecility and idiocy do not exist in one grade; they are found in every grade of society. The idiot, the imbecile, the high-grade imbecile, the moral imbecile and the eccentric, cranky, emotionally unstable individual who never comes into contact with realities, may occasionally be born of parents in which the stock, as far as can be ascertained shows no evidence pointing to an inborn hereditary disposition which would account for the mental defect. Still, a carefully constructed pedigree, for at least three generations, in which mental infirmity is not excluded because a patient has not been certified as insane, or mentally deficient, will often show an inherited inborn disposition. I have often noticed that parents and relatives, especially in the upper classes, often do their best to hide the facts pointing to hereditary predisposition. In some cases it may be that abnormal prenatal and postnatal conditions interfere with the growth and development of the highest and latest evolved structures of the brain, consisting of countless thousands of millions of cells with their branching fibres. Where this great brain is properly developed it fills the dome-like vault of the skull, constituting the most essential feature which distinguishes, at a glance, the normal man from the highest anthropoid ape and the microcephalic idiot. There is a correlation between the failure in numbers and development of these nervous units (neurones) forming the great brain and the degree of feeble-mindedness. Some cases of arrest of growth of the great brain may be due to anomalies in the development of the nutrient blood vessels, or to their obstruction before or during childbirth, and it is possible that unsuccessful attempts at abortion may account for some cases of failure of growth. Some failures of development of the brain are due to absence of the thyroid gland causing a cretinous idiocy. That the mental defect is due to lack of secretion of this gland is proved by the fact that infants so affected when given this gland with their food develop into normal children. But the majority of the cases of arrest of development of the organ of mind are due to an inborn germinal deficiency. These latter can only be prevented from occurring by the education of the public conscience and moral sense against unsuitable marriages, and mating of individuals with a bad heredity. The mental defective, however, has little control over animal passions, and the moral sense, which is one of the innate stable bonds of union of the social instinct, is either weak or absent; consequently, segregation of mental defectives is necessary for two reasons, *viz.*, firstly, they are unable to compete with their fellows in the struggle for existence, consequently they are reduced to habits and occupations which, if not criminal, are of little or no civic worth. Secondly, because the higher grade imbeciles have normal

reproductive organs, and their power of procreation is unlimited. Sterilization has been advocated, but I am not in favour of this procedure, for it would by no means improve their civic worth or capacity to earn an honest living, and the majority of them would still require to be maintained by the ratepayers in prisons, in special institutions, in infirmaries, and by outdoor relief. For twenty-five years I have been interested in the relation of syphilis to the causation of mental disease. A Royal Commission, of which I was a member, proved beyond a shadow of doubt that this, of all the preventable causes, is the most potent in the production of mental disease and mental deficiency. Syphilitic mothers who previously have suffered with abortions or given birth to children dying in early infancy, and children who live, but are mentally and bodily diseased, have with systematic treatment at the special centres given birth to healthy children, who have grown up healthy in body and mind. I am quite sure that the wide-spread knowledge of this source of disease of body and mind (the two are inseparable), and the success of education of the practitioner and the public in prophylaxis and treatment of syphilis, cannot fail to have an enduring and increasing influence in the prevention of mental deficiency. Recently, another infective disease, the cause of which we do not know, although it seems to be associated with influenza epidemics, is lethargic encephalitis. In many cases of this disease the inflammatory condition of the brain it causes does not end fatally, but may so damage the brain that the person is left feeble-minded. As it affects children as well as adults, we are finding among the patients of institutions like this feeble-minded children with characteristic signs and symptoms (the Parkinsonian syndrome), pointing to an attack of lethargic encephalitis. Is this a new disease, or is it an old unrecognized disease which has been discovered?

The National Council for Mental Hygiene, which was founded in May, 1922, has for one of its objects the mental hygiene of child-life in relation to education and parental responsibility. What we have not sufficiently recognized in the past is that a child has an inherent desire for self-expression, which is constantly in conflict with conventions, social usages and customs, of which it has little or no innate understanding. The character and inborn capacity of the child will in a manner reveal itself by a free expression of its plans, its hopes and its desires: it has doubts and fears, joys and sorrows, some slight and fanciful, others deep and real. It tries to relieve emotional tension in its own way, but often it finds it foolishly thwarted and repressed. "Don't do this" and "Don't do that," too often greets it, and destroys its spontaneity and inborn individuality. Much attention has been given by parents and teachers and the school doctor to the physical and intellectual side of a child's upbringing. Attention very properly is given to its teeth, its tonsils, its adenoids, and it cannot be denied that chronic sepsis arising from neglect of attention to these structures, especially the teeth, has lately been emphasized as a cause of mental and bodily ill-health. Again, great efforts have been made to impart book-learning to mental defectives without results corresponding to the outlay in time and money, but the fact is too often overlooked that there may be considerable intellectual deficiency, as judged by its expression in articulate and graphic language, without there being a corresponding manual incapacity—a more primitive form of intelligence, but from an economic point of view often as useful. An educability in manual work or domestic occupations will ensure economic independence and social adaptability more certainly than a booky education, particularly if it is associated with an emotional instability. Medical science has greatly advanced, and it has shown that a stable mental organization has its foundation in the involuntary nervous system which controls the reproductive organs, the heart, the respiration, the digestive and excretory organs, and last, but not least, the ductless glands with their internal secretions which provide the driving forces of the emotions. But this driving force of the emotions must be controlled. The early inculcation of this primitive source of mental energy is essential, for unless the habit of control is cultivated in early child life by the mother, the nurse and the teacher, emotional instability is fostered and tends to become firmly installed. The cause of emotional instability is not only due to parental inheritance, but to the emotionally unstable mother, especially if the child is the only child, and it is often as necessary to treat the mother as to treat the child. An emotional instability engendered in childhood may lead, and often does lead, to anti-social conduct and economic inefficiency in the adult.

It is pathetic to see how frequently a mother of an idiot or imbecile child seems

to feel a moral sense of responsibility and remorse for bringing it into the world. If it is the only child, and the mother is able and fit to bring it up, no harm is done to society while it is a child. If, however, it has to be segregated in adolescence, it is a greater trial to the mother and her offspring than if it were segregated when a child. Still, it cannot be insisted upon ; it is otherwise where there is a family, for the maternal instinct of pity exacts a disproportionate amount of sympathy, care, time and money, frequently resulting in neglect of the other children. This, however, is not the only reason why the home is unsuitable for the upbringing of the child, for its faulty habits, conduct and speech are liable to be imitated by the other children. Again there is the tendency to arouse jealousy and resentment in the children to their parents. Consequently feeble-minded children are much better in an institution such as this, where there is abundant testimony, including letters, from parents, that they are treated kindly, their bodily welfare looked after and such faculties as they possess are developed by experienced and trained teachers under the direction and guidance of those keenly interested in maintaining the high standard of efficiency which this Royal Albert Institution has so long held.

PRESENTATION TO SIR FREDERICK MOTT, *K.B.E.*, *F.R.S.*

ON November 15 Sir Frederick Mott was made the recipient of a very interesting presentation from those associated with him during his long period of service as Pathologist to the London County Mental Hospitals and at the Maudsley Hospital. It consisted of a Chippendale bookcase containing a complete set of the novels and poems of Mr. Thomas Hardy, and was accompanied by an album embodying a short address signed by ninety-six persons, including representatives of the medical, clerical and engineering staffs of the hospitals, and of some members of his class of psychiatry. The presentation was made at a meeting in the County Hall by Mr. H. F. Keene, *O.B.E.*, Chief Officer of the London County Mental Hospitals Department ; Dr. P. C. Spark, the senior of the medical superintendents of the London mental hospitals, and Dr. C. Hubert Bond, *C.B.E.*, commissioner of the Board of Control, also spoke of the great services Sir Frederick Mott had rendered to mental pathology and medicine. Sir Frederick Mott, in acknowledging the presentation, said that although many honours had come to him, he esteemed none so highly as that done him by this presentation from colleagues, fellow workers, and friends. The album contained a short address in which the signatories expressed their appreciation of Sir Frederick Mott's brilliant research work, of his efforts in connection with the establishment of the Maudsley Hospital, and of the great assistance he has afforded to workers in the field of psychological medicine. The following beautiful sonnet was presented by Mr. R. H. Curtis, of the Mental Hospitals Department :

Who would seek Truth essays no light emprise.
Not for his feet those paths which all may tread
Of common use, not for his lips the bread
Which many break, nor for his eager eyes
Sufficeth that wan gleam from moon-lit skies
Which most call Knowledge ; not for him the dead
Contentment of an oft-trod round, where led
By ancient Wisdom men grow customwise.

He looks afar, and sees a glimmering fire
Beckon him on, a glow of dawning light
Upon a distant peak, and through the night
He strives, above the mist, above the mire,
Strives in the dark, though footsteps flag and tire,
Till, at the day, Truth breaks upon his sight.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION AND THE GENERAL
NURSING COUNCIL (ENGLAND AND WALES) IN CONFERENCE.—
Dec. 13, 1923.

Notice of this impending Conference was given by the President of our Association at the Quarterly Meeting held on November 22, 1923 (see p. 158). The Minister of Health fixed December 13, 1923, at 3 p.m. as the date of the conference, the place of meeting being the Conference Room at the Ministry of Health. The representatives of the Association were Lt.-Col. Edw. Goodall (President) Prof. George Robertson, Dr. R. Worth (General Secretary), Dr. M. A. Collins (Chairman of the Education Committee), Dr. A. W. Daniel (Secretary of the Education Committee), Lt.-Col. J. R. Lord.

The following representatives attended on behalf of the General Nursing Council : Sir Wilmot Herringham (Chairman), Dr. Bedford Pierce (Chairman of the Mental Nursing Committee), Mr. Donaldson, Miss Wiese, Miss Lloyd Still (Chairman of Education and Examination Committee), Miss M. S. Riddell (Registrar).

There were also present Sir Frederick Willis and Dr. C. Hubert Bond (Members of the Board of Control), and representatives from the Ministry of Health and the Scottish Board of Health.

Sir Arthur Robinson, as representing the Ministry, presided.

Certain suggestions were made on behalf of the Ministry of Health and of the Board of Control, who thought that it would be unfortunate if two examinations continued. The representatives of the Council felt that it would be disastrous to the cause of education of mental nurses if any divergence of action took place between the Council and the Association. This was reciprocated by the representatives of the Association, who thought, however, that, as the older body which had undertaken the whole of this work for many years in Great Britain, Ireland, and in places overseas, notably South Africa, it was for the Nursing Council to lay its proposals before them. They were keenly alive to the official position the Council was in and also to the improved status offered to mental nurses by registration. There were benefits to be gained on both sides by reciprocation, which would be for the good of mental nursing and of nursing generally. A long and frank discussion followed the Nursing Council's suggestion that the Association might take up an advisory position towards the Council in matters of education and examination of mental nurses; and, secondly, that since all the Council's future examiners in that matter would be either members or officials working under the direction of members of the Association, it would be of great assistance to the Council if the Association were to select examiners, and nominate them to the Council for appointment. These suggestions were finally accepted by the representatives of the Association subject to the confirmation by the Association, to whom they would be reported in due course.

The following recommendations were therefore submitted to the Council at a meeting of the General Nursing Council held on December 18, 1923, by the Chairman of Council, acting on behalf of the members who attended the Conference :

1. That the General Nursing Council invite the Medico-Psychological Association to form an Advisory Committee to assist the General Nursing Council, such Advisory Committee to meet the Mental Nursing Committee of the General Nursing Council for the purposes of matters appertaining to the Final Examinations for admission to the Supplementary Register for Mental Nurses, the resolutions of such meetings to be recommendations to the Council.

2. That the General Nursing Council invite the Medico-Psychological Association to nominate the Examiners for the Final Examinations, for appointment by the General Nursing Council.

Dr. BEDFORD PIERCE, in the course of discussion, said that he was exceedingly pleased with the general tone of the conference, and that the two bodies with which he was connected should be willing to co-operate, since both were working for the welfare of the mental nurse.

Miss COWLIN inquired whether the Medico-Psychological Association were going to continue to hold their examination in addition to that of the State examination.

Dr. BEDFORD PIERCE said that the representatives at the conference could not, of course, bind themselves to anything which possibly their Association might not wish, but it was hoped the Final Examination for both bodies might be the same. Of the fees he could not speak.

Dr. BEDFORD PIERCE, in reply to a question by Sir JENNER VERRELL, said that the procedure would be for the Registrar to send a copy of the resolutions passed to the M.P.A., inviting them to set up an Advisory Committee. The two committees would then meet, and in due course would send joint recommendations to the Council. There was, he was sure, no wish on the part of anyone to undermine the authority of the Council.

The above resolutions were approved by the Council.

DEATH OF DR. ALFRED MILLER.

It is with the deepest regret that we have to record the death of Dr. Alfred Miller, who has been Registrar of the Association since 1902. His absence from the Autumn Quarterley Meeting was noted, and there were rumours of ill-health. Nevertheless, the news of his death, which was published in the *Times* as having occurred on December 4, 1923, after a very brief illness, came as a great shock.

Dr. D. Rembrant has very kindly consented to write an obituary notice of him, which, together with a photograph of the deceased gentleman, will appear in our next number.

We also regret to announce the death of Dr. Robert Pugh, a graduate of Edinburgh (Gold Medal for Thesis), who served at Winson Green, Birmingham, Claybury and Talgarth with great credit and ability. He was born on October 5, 1873, and died on April 12, 1923, leaving a widow and three children.

NOTICES BY THE ACTING-REGISTRAR.

FINAL EXAMINATION FOR THE NURSING CERTIFICATE, MAY, 1923.

List of Successful Candidates.

* Passed with distinction.

Bedford.—Sidney Walter Presland, Hilda Maud Page.

Berkshire.—Irene M. Dean, *Violet E. Newstead, Violet M. White, Margaret Coleman, Mildred Weaver.

Bucks.—Polly Chambers Fisher, Rose Higgins, Harry Howes, Sydney Neary, William Plastow, Josiah Cowper Willmot.

Cambridge.—Myrtle Farrance, Ruth Goddard, Nellie Adelaide King, Mabel Hudson, *Charles Crack, *William Elbourne Dean, Horace Samuel Ling, Arthur Frederick Starling, Charles William Richmond.

Chester, Upton.—Ida Marriott.

Chester, Macclesfield.—Stella Muriel Bailey, Mabel Irene Dyne, Joseph Mollard, John Henry Crouch.

Cornwall.—Eva Robinson, Nellie Robinson, Ernest Williams, Henry Sheen, George Herbert Vincent, Harold Mullis, William John Osborne, Thomas Arthur Davies, Thomas George Truscott, Alfred William Vanderwolf.

Cumberland and Westmorland.—James Coupland.

Derby.—Annie Everitt, Olive Jackson, Edith Baker, Daisy Halford, Doris Jordan, Margaret Hudson, Percy Padmore, Harry Balding, Joseph Colbourne Linney.

Devon.—Lucy Spear, Edwin Hardy Christopher, Reginald James Frampton.

Dorset.—William Edward Damen, William Henry Crew, Marie Macalister.

Essex, Brentwood.—William Aspinall, Eleanor Greenfield, Elsie Billen, Grace Inglis, Emily Deeprose.

Essex, Severalls.—Albert Styles, Lord Arthur Seymour Jones, Hubert Victor

Holding, Joseph Fettes, George Frederick Turner, Charles George Bradford, Frederick Weldon Corkery, Clifford Frederick Warner, Ernest Hayman, Charles Moore, Frederick John Wright, William Alfred Tugwood, Albert Jolly, Harry Eli Aldous, Dorothy May Howe, Jane Keating, Dorothy Dunning, Ella Margaret Wilby, Katherine Currie, Winifred Da Costa Wood, Dora Edna Gardner.

Glamorgan.—William T. Cunnick, Percy Hawkins, Mary Bowen, Frances Mary Jones, Sarah Richards, Cainwen Vaughan, Arthur George Allen, Albert Victor Burd, Lizzie Roberts.

Hereford.—Arthur Henry Pearce, Lilian Davies, Margaret Jones.

Herts, Hill End.—Herbert Leslie Fry, William Runchman, Frederick James Taylor, Florence Minnie Smith.

Kent, Maidstone.—Herbert H. Weston, Flora E. Platt.

Kent, Chartham.—Ethel Florence Smith, Alfred Cogger.

Lancashire, Rainhill.—James Bridge, Fred Kenyon, Frederick Chas. Lewis.

Lancashire, Whittingham.—Cuthbert Fare, Ernest Albert V. Bennett, Frederick C. Robinson, Robert H. Heaney, William Gorst, James Snape, John A. Storey, Herbert Richmond, James Stothert, Robert Hall, John Porter, Frances Blackburn, Hudson Birkett, Fred Bradley.

Lincoln, Bracebridge.—Caroline Hawkes, Agnes Winter, Ernest Smalley.

Lincoln, Kesteven.—Arthur Eastwood, Lily Harris.

London, Banstead.—William Edwin Collyer, Thomas Edwards, George Frederick Farage, Solomon Richard Gibbs, Henry Ives, William Frank Jones, Joseph Edward Kearn, James Edward Lawrence, Sidney James Mully, James Frederick Shepherd, Arthur Sidney Sinfield, Albert James Sugars, Elsie Elizabeth Bennett, Sarah Jane Breeze, Violet Carter, Florence Fanny Cheeseman, Clara Elizabeth Curry, Maud Henrietta A. Dunn, Edith Mabel Elsley, Catherine Teresa Glennane, Hilda Maud Higgs, Dorothy May Hulford, Dorothy Rose McKinley, Hestor Maud Tempest, Emma Tilley, Rosina Mary Townend, William John White.

London, Bexley.—William Christopher Ashby, Leslie Harry Bourne, Charles Arthur Dangerfield, Frederick William Francis, James Green, Walter John Haygreen, Frederick Leopold Partridge, Harold James Wise, James Bailey Woodgate, Emily Cooper Campbell, Winifred Shaxon, Alice Maud Collins, Laurie Grace Hudson, Agnes Sullivan, Rose Elizabeth Day, Edith Gabrielle Freestone.

London, Cane Hill.—William Sidney Boniface, John Norman, George Henry Pacey, Albert Booker, William Henry George, Hazell Albert Childs, Owen John Ryves, Hetty Evelyn Betts, Tirzah Elizabeth Bootman, Beatrice Agnes Exley, Gertrude Margaret Hastings, Nellie Jolly, Hilda Lily Marshall, Maud Alice Mary Voller, Elfreda Mary Wright, Edith Dignum Littlejohn, Thomas Reginald Carroll, Maurice John Sherlock, William Joseph Garnett.

London, Colney Hatch.—Alison Bertie Gatward, Edward John Glavin, Reginald Percy Oliver, Francis Cushi Bulley, Sidney William Revell, *Charles Samuel Bulley, Maurice Edgar Townsend, Thomas William Gudgeon, Arthur James Carter, Ida Selina Gothard, Olive Edith Gothard, Gertrude Maud Yeldham.

London, Ewell Ministry of Pensions Hospital.—Alfred Lancley, William John Saitch.

London, Hanwell.—Blanche E. Mason, Annie F. Easton, Charles F. Farrance, Francis Coles, Frederick Reeve, George H. Bint, James W. Page, George Jenkins, Charles Williams, William G. Rogers, William Onyett, Herbert H. Deering, Walter V. Ashman.

London, Horton.—Nellie Thompson, Kathleen Mary Holden, Frances Susannah Charlton, Florence Louisa Allen, Emily Ada Hodgkiss, Lydia Packer, Elsie Whitaker.

London, Long Grove.—Leonard John Sandall, Edwin Tucker, Thomas John Whitehead, Louisa Burdfield, Marion Daniels, Edith Mabel Edgington, Ethel Emily Ellingham, Florence Hallard, Johanna Healey, Dorothy Rose Jackman, George Thomas Burdett, William Dance, Alfred James Harding, Victor Edwin Highgate, Frederick Smith Mann, William Edward Marsh, Herbert Wilfred Rounce, Arthur Walter Raynor.

Middlesex, Springfield.—Gladys Hartill, Ivy Monica Holland, Alice Clara Simonds, Maud Kate Layton, Ellen Frances Downard, Ethel Harriet Staples, *Lydia Sims, Nellie Irene Picknell, Fanny Harriet Coggan, Frederick Owen Moore, Isaac William Armstrong, William Alfred Clark, Joseph Fredk. H. Barrow, William George Hogg, William C. Stroud, Alfred E. Cook, Thomas H. Reed.

- Middlesex, Napsbury*.—Ernest George W. Mattick, Frederick Smith, *Elizabeth Holliman, Queenie Sage, Agnes Stokes, Florence Aries, Gertrude Sykes.
- Monmouth*.—William Probert, *William Roberts, Harley Williams, Albert Edward Eveness, Albert Henry Lewis, Ernest William Warren, Frances Talbot, Louisa Williams, Elizabeth Ann Evans.
- Norfolk*.—John Henry Battleday, William Barber, Frederick Dickerson, John Ernest Edwards, Reginald Graves, Ernest Valentine Morter, Mary Teresa Farley, Evelyn Jackson.
- Northampton*.—Frank Austin, Charles Wm. Houghton, John Thomas Mundy, Elsie Bulman.
- Northumberland*.—Dora Slater, Jean Campbell Maxwell.
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FINAL EXAMINATION FOR THE NURSING OF MENTAL DEFECTIVES, MAY, 1923.

- M.A.B., Darenth*.—*Ella Anderson, Annie Toft, Elizabeth Birchall, Cecilia Nye, Hilda Cox, Ella Roberts, Ethel Pankhurst, Elsie Haywood, Louisa Stephens, Florence Nightingale, George Devereux, Albert Lanham, William George Foot, Charles Jones, George Fuller, Albert Dinnage, Christopher Wilson, Arthur Towns-
 end, Alfred Painting, Edward Martin, William Lusher, Joseph Maguire, Alfred C. Wright, George Baker, Herbert H. Wells, James Ranger.
Stoneyetts Institution.—George Hunter.
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NOTICES OF MEETINGS.

- Quarterly Meetings*.—February 21, May 22, 1924.
South-Eastern Division.—April 20, 1924, Kent County Mental Hospital, Barming Heath, Kent.
South-Western Division.—April 24 or 25, 1924.

Scottish Division.—Special meeting at the Royal College of Physicians, Queen Street, Edinburgh, on February 7, 1924, at 2.30 p.m.

Irish Division.—April 24, 1924.

APPOINTMENTS.

GUPPY, FRANCIS HENRY, *M.C.*, *M.R.C.S.*, *M.R.C.P.*, *D.P.M.*, Deputy Medical Superintendent, Brighton County Mental Hospital, Haywards Heath, Sussex.

ROBERTS, NORCLIFFE, *O.B.E.*, *M.D.*, *B.S.Durh.*, *D.P.M.*, Medical Superintendent, West Park Mental Hospital, Epsom, Surrey.

WOOTTON, L. H., *M.C.*, *B.Sc.*, *M.B.*, *B.S.Lond.*, *D.P.M.*, Medical Superintendent, Ministry of Pensions Hospital, Ewell, Surrey.

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A. K. SHARMA: Auto-Suggestion and Hindu Psychology
I. A. RICHARDS: Desire and the Desirable
E. M. STANDING: The Uplifted Veil: an Experience in the Dentist's Chair
A. M. MANTELL: Religious Beliefs as a Product of Imagination
H. REINHEIMER: Darwinism Re-examined
ADELYNE MORE: Mind in Action
E. EALES: Marcel Proust as Psychologist
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(HULME). *Daedalus* (HALDANE). *Psychology of Primitive Peoples*
(BARTLETT). *La Religion et la Foi* (DELACROIX). *La Philosophie*
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APRIL, 1924.

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EDITORS

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Books for Review received :

Mending your Nerves, by *Flora Klickmann*.
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VOL. LXX.

ALFRED MILLER, M.B., B.Ch.DUBL.

By the death of Dr. Alfred Miller, Medical Superintendent of the Warwickshire County Mental Hospital, the medical profession of Warwickshire, the Warwick County Mental Hospital, and the Medico-Psychological Association of Great Britain and Ireland have sustained a great loss.

During the summer and autumn of last year Dr. Miller appeared to be in his usual robust health, but a very brief illness which attacked him in November terminated fatally on December 4. He was in his 65th year. Dr. Miller was born in Dublin, educated at Felstead School, Essex; Kingstown School, County Dublin; and at Dublin University, where he graduated in medicine in 1881.

In 1882 he was appointed an assistant medical officer at Hatton Mental Hospital, Warwick. Two years later he became Senior Assistant Medical Officer, and in May, 1889, he was offered the post of Medical Superintendent of that institution, a post which he held until his death.

Dr. Miller found Hatton Mental Hospital an old-fashioned county asylum, with unplastered brick walls, poor accommodation, faulty drains, unsatisfactory water supply, and with little occupation or amusement for the patients. He had the satisfaction during his long term as Medical Superintendent of completely renovating every part of the institution, and making it one of the model county mental hospitals of England.

In addition to the work of completely remodelling the old building, he planned many valuable additions—including Leigh House, a separate building for the treatment of private patients. He was one of the first medical superintendents to appreciate the great advantage of open-air treatment, and his plans for the many verandahs which

he built were ingenious and economical. Under his guidance, too, a new drainage system and a new water supply were carried out.

Dr. Miller's skill as a draughtsman and his remarkable knowledge of hospital architecture were a most valuable possession to his committee of management, and he ungrudgingly gave his skilled advice to other mental hospitals in the surrounding counties in the preparation of plans for the additions and alterations which have been carried out in the last thirty years.

Dr. Miller completely altered the whole spirit of the institution, and, from being a home for the insane, he made it a curative hospital. His knowledge of the smallest details of every department of his hospital was most remarkable. He understood the therapeutic value of work, and introduced many new industries at Hatton, among them the weaving of tweed.

It was a pleasure to accompany him on a visit of inspection to his wards, shops, kitchens, gardens, farm, etc. He knew his patients and their complaints intimately, he knew every detail of the work of every member of his large staff of male and female nurses, artisans and servants, and as this strong, determined, energetic, capable, yet kind, sympathetic and cheery man passed by, the face of each patient or member of the staff lit up with respect, loyalty and pleasure—which sprang from the knowledge that a friend and benefactor was near them. His presence was a perpetual tonic at Hatton.

Dr. Miller was recognized by the medical profession of Warwickshire and the surrounding counties as an authority on mental diseases, and as a consultant he was in great demand.

During the war he did the lion's share of the work of his own mental hospital, and found time to assist in the neighbouring war hospitals, where he showed his remarkable versatility by performing major operations.

He was Medical Adviser of the County Mental Deficiency Committee, and member of the Committee of Management and House Committee of the Warneford General Hospital, Leamington.

For very many years Dr. Miller has been Registrar of the Medico-Psychological Association. The work of this office has enormously increased since its foundation. Dr. Miller devoted much time and thought to its exacting duties. All members of the Association will agree that the ever-increasing labours of the Registrar were admirably carried out.

He never spared himself in the cause of mental nursing. He found time to give lectures and demonstrations to his own staff, and he regularly examined the nurses in several neighbouring mental hospitals. He never missed a Council Meeting, and rarely was absent from any of the meetings of the Medico-Psychological Association.

Dr. Miller will always be remembered as the maker and great administrator of Hatton Mental Hospital, and as one of the pioneers of modern mental nursing.

In his earlier years he was a well-known athlete. He played as a forward for Ireland in the International Rugby matches of 1879, 1880, and 1881. He was a good left-hand bowler and played for Dublin University first eleven for some seasons.

He had several hobbies. He could play the flute and the violoncello, and for many years he conducted his own hospital band. He was a very skilful and artistic photographer, and he obtained several prizes for his pictures. He was an expert carpenter and cabinet-maker.

He had a genius for friendship, and a host of personal friends who were attracted to him by his great abilities, strong common sense, loyalty, and invariable infectious good-humour. His hospitality was unbounded.

Dr. Miller's home life was a very happy one. He leaves a widow and two daughters to mourn the loss of a good husband and a good father.

DANIEL F. RAMBAUT.

Part I.—Original Articles.

The Organization of Medical Education in Psychiatry and Neurology at the Dutch Universities, with Special Reference to the Neuro-Psychiatric Clinic at Utrecht University.

An address delivered to the Medico-Psychological Association of Great Britain and Ireland on November 22, 1923, by Dr. C. WINKLER, Professor of Psychiatry and Neurology, Utrecht.

THE organization of the study of psychiatry and neurology at the Universities in Holland has been very difficult. Schreuder van der Kolk, the well-known reformer of psychiatry in my country, was Professor of Physiology at the University of Utrecht. The fruit of his work was the asylum of Meerenberg, exemplary at that time, very useful still, but he did not organize medical education in psychiatry. He died in 1862. It was not until 1871 that our "Society of Psychiatry" was constituted. The many petitions originating from this society brought about the first possibility of psychiatric teaching by our "law on higher education," of 1877. The director of the asylum in Utrecht, Dr. Van der Lith, got the title of a university professor. His lectures were not obligatory, and he retired in 1878. In Amsterdam an energetic young doctor, Arie de Jong, taught psychiatry from 1878 to 1881. When he retired psychiatric

teaching was no longer given in Holland. Organization of this branch of medical education had never existed. Examination in it did not exist. Asylum doctors were mostly recruited from military medical men, returned from our colonies, who desired to add the small pay of the asylum to their pension.

Such was the situation of psychiatry in Holland in 1882, when Donders, Professor of Physiology at Utrecht, and always interested in all details of medical education, proposed to me to try to reorganize the teaching of psychiatry. I, however, refused. I knew nothing of psychiatry, but I had followed a few lectures of Dr. Van der Lith, and I was not much interested in it.

On the other hand, I was greatly interested in the then recent anatomical work of Meynert in Vienna, Gudden in Munich, Forel, Ganser and Monakow in Switzerland. I soon after made a long scientific journey through Europe, and it was Wagner von Jauregg, then House-Physician at the Clinic of Prof. Leidesdorff in Vienna, now Professor in Psychiatry there, who opened my eyes to the great interest of psychiatry.

After returning, I reopened negotiations with Prof. Donders. But now he was in opposition to me. For I brought with me certain well-defined wishes—principles, if you prefer—and I asked that they should be accepted before negotiations went further. These wishes were :

1. Psychiatry should be united to neurology, and both subjects should be taught by the same professor.
2. Psychiatry should not be taught in the asylum.
3. Psychiatry should be taught on the same scheme as, and in intimate contact with, internal medicine, surgery, midwifery, etc.

It should be taught in a special clinic for psychiatry and neurology in the immediate neighbourhood of the other medical clinics.

I succeeded in convincing Prof. Donders. In 1884, in an address to the Dutch Society of Psychiatry, he delivered his views in the following words : " Education in psychiatry of all students in medicine is of general importance to the State, and in many respects, teaching of psychiatry and neurology by a single lecturer must be recommended."

Perhaps it may be rather difficult for English doctors to understand why those claims were necessary in Holland. Medical education in England has grown in another way to what it has in my country. Your system of medical schools is unknown there. The great advantage of your system is that you may use young doctors in all the larger hospitals for the purpose of teaching students, without thereby conferring on them a position under the State. You have at your disposal a very valuable staff of well-trained young teachers, and we have not. But one of the drawbacks of your system culminates in

your actual discussion on the whole-time professor. Our professors are all meant to be whole-time professors. Since 1877 the law has forbidden them engaging in general practice. But no law can forbid that if the professor is the foremost man in his special faculty, difficult cases are brought to him. Moreover I mean, that paying patients in my Clinic are a great support to the teaching, and I would very much regret if I was forced to abandon the recruitment of paying patients for educational purposes.

The evolution of higher medical education in my country stands on quite another base. Before 1877 only the State had the right to give higher education. Only three universities—Leyden, Utrecht, Groningen—existed. Every university has five faculties; one of them is the faculty of medicine. With the law of 1877, however, the State gave the municipality of Amsterdam the right to have a university on the same scheme. A fourth university, the "Municipal University of Amsterdam," was founded, and its faculty of medicine worked in the great hospitals of this city.

A few years later the law made possible so-called free universities, under certain restrictions. A free Christian university soon appeared in Amsterdam. But the lack of hospitals presented difficulties to the creation of its faculty of medicine; this faculty is in the free university only represented by a clinic for psychiatry, built by private means.

Last year a free Roman Catholic University was founded, actually without a faculty of medicine.

After this excursion let me return to my claims. I knew there would be much discussion about them, and I had to defend them publicly. I was nominated a university lecturer in psychiatry and neurology in 1885, but before recommending me to this post the Faculty of Medicine knew and had accepted my wishes, and the government, charging me with the double task, allowed me at the same time to work out the publicly-defended principles. So teaching of psychiatry and neurology began in 1885.

Lectures in psychiatry were provisionally given in the asylum, twice a week, in a small room. Another room was reserved there for research. Lectures in neurology were given in a room of the internal clinic of Prof. Talma. There was a budget of £82 (£1,000) to cover the expenses of installation and research.

The beginning was not at all in proportion to the desired aims. It only opened a way to get them. At the same time, more earnest discussions began upon the union of neurology with psychiatry in our society and in the faculty of medicine. The general argument of the opposition was that no single man could control two enormous fields of research, such as neurology and psychiatry are. That certainly is true, but the same argument may be applied against

every university lecturer. Where is the doctor of internal medicine who is provided with enough knowledge in physics, chemistry and morphology to control a teaching department giving instruction regarding all diseases of the heart, kidneys, liver, endocrine organs, etc.? And it is not necessary, and is even dangerous, to divide medical education into more specialities, growing every day in number. And the most opposition came from specialism. The danger that neurology could be pressed to death between internal medicine and psychiatry was evident to neurologists. They preferred to see neurology as a special branch of medicine, and forgot that in that case the danger they feared was much greater. The physician of internal medicine fought against my scheme with my own weapons. Why take neurology away from the internal clinic? they asked. It is taught there very fruitfully. Now, I certainly believe that a certain amount of nervous diseases, such as tabes, apoplexy, multiple sclerosis, cannot be missed in teaching internal medicine.

But one cannot lecture on general paralysis without comparing it to neural syphilis or tabes, or on hysteria or dementia præcox without multiple sclerosis. One cannot treat of Huntington's chorea if Sydenham's chorea and athetosis are beyond one's charge, or lecture on idiocy or imbecility if one does not get cretins, mongoloids, and tuberous sclerosis, or if hereditary ataxia is a forbidden subject to the lecturer. The lecturer on psychiatry must have a certain amount of nervous cases, because he cannot do without them. Other opposition came from extreme psychiatrists. They pointed out that the most skilful neurologist is not necessarily a psychiatrist. The thesis is true, but what is psychiatry without neurology?

The existence of a psychological and philosophical base of psychiatry is beyond all dispute, and experimental psychology belongs to the clinic.

However, a certain current of opinion in psychiatry was maintaining that anatomy and physiology of the brain, or neurological knowledge, is of not much use for it, because psychological happenings have no material underground. I do not desire a doctor of the asylum calling himself "the doctor of the psyche," and who neglects somatic signs of disease, but others did. Psychiatry founded only upon psychology, even if studied by a man of genius, a sharp observer of clinical cases, has always led us in a dangerous direction, and the era of Heinroth with its "all alienation reposes on sin" was fresh in memory in 1882.

In many asylums the clergyman was accepted as the head, the physician appeared in the second *rôle*.

It is not unknown to me that even in recent times phenomenologists and psycho-analytic psychiatrists are again defending the

scheme, psychiatry without anatomy, etc., but they have still to prove it in the future.

All such controversies were fought out in the bosom of our society and of the Faculty of Medicine.

The end was that the society changed its name, and became a Society for Psychiatry and Neurology: since then neurologists and psychiatrists in Holland have always held together. Both parties were grateful for it, and if anyone should try to change it now he would not succeed. More difficulties arose in the Faculty of Medicine. They also were brought on by specialism. If the teaching of neurology and psychiatry at the universities is really to be, as Donders claimed, of general interest in medical education, the student must be taught these subjects in connection with the other branches of medicine. He must learn as much as he ought to know and can use in his work as a general practitioner. At the university students cannot be taught to become specialists before the final examination. But specialism asks more. The ordinary procedure is the following. First a society of specialist doctors asks and obtains a lecturer to teach a special branch. Now, the Society, acting like a trade union, or better, as a guild, asks protectionism. It desires a special doctorship and a law, prohibiting practice to everyone who is not a specialist. With us this went so far that our government, deferring to the wishes of specialism, projected a new law for medical education. To every special branch of medicine was assigned a special examination, *e.g.*, the future psychiatrist was no longer examined in internal medicine, surgery, midwifery, ophthalmology, etc. He was examined in psychiatry, neurology, psychology, philosophy, social hygiene, forensic psychiatry and children's diseases.

One can conceive that a specializing doctor in children's diseases was the intellectual author of this project.

Happily, it was rejected by all faculties, and did not become law. To grant university degrees to all specialists would probably lead to the extermination of general medical instruction.

No man should specialize before his final examination. One may desire that the young doctor, after this examination, has seen so much of psychiatry that he is able to enter an asylum and develop into a psychiatrist. It is better for him to remain a few years in the clinic, where he is relatively well paid as a resident. But if he desires to conquer the difficulties of neurologic or psychiatric specialism in his own way, one must allow him freedom to do so—self-made men are often very good men.

It has till now been possible to retain specialism within certain limits, but I fear for the future. However, those discussions were only a prelude for the negotiations with the governmental authorities.

The first objection was a legal one. The law did not permit the admission of lunatic patients into a clinic. A clinic for neurology and psychiatry is a hospital, and to nurse patients, legally stamped as insane, under the same roof with other patients would be illegal.

The solution came in a very particular way.

There are always to be found delirious patients in the street; there always are, especially in large cities, insane, qualified for an asylum, for whom there is no room in the (mostly) overcrowded asylums.

The law allows them to be brought to the police station, but to avoid this atrocity it makes an exception; therefore, every hospital has permission to admit temporarily two alienated patients.

In Amsterdam, where 200-300 insane waited for admission into the asylum, they were brought primarily to a reserved pavilion of the Wilhelmina Hospital. This situation was necessary, but illegal.

It was very easy to change the law by giving another definition to clinics and some hospitals, like the Wilhelmina Hospital. They were designated hospitals having permission to admit more than two insane persons, with or without legal authorization. This new measure proved to be beneficial for many patients.

Moreover, Dr. Van Deventer, Director of the Wilhelmina Hospital, immediately made use of the occasion, and began to lecture on psychiatry in Amsterdam.

After solution of the legal objection, a project was put forward for a clinic of psychiatry and neurology in Utrecht. It was evident that the building would be rather expensive: roughly it would amount to £50,000 (f600,000).

The authorities, frightened at this outlook, now argued that the best place to teach psychiatry and neurology was the asylum, because it was less expensive. This argument evoked a sharp protest, not only from me, but also from our Society, and from the Faculty of Medicine. It was demonstrated again that teaching of psychiatry and neurology was impossible there (*a*) because the asylum seldom got transient psychoses; delirious, alcoholic, epileptic, and traumatic psychoses of short duration did not come there; criminals in custody for trial, for the purpose of making medical reports on them, were not found in the asylum; neither were there neuropsychoses of minor severity, such as hysteria, neurasthenia or hypochondria. Tuition in psychiatry and forensic psychiatry, however, required such cases above all others. (*b*) Teaching of neurology in the asylum would be handicapped, and the government, having united the teaching of neurology with that of psychiatry, had also to provide neurological teaching. (*c*) The presence of a lecturer in the asylum opened a

permanent source of conflict, because the interests of the teaching and those of the asylum would often be opposed to each other. (d) The best and the least expensive solution would be to build a clinic for psychiatry and neurology with a hundred beds, and to make the lecturer the responsible director of it.

So the years passed with much discussion and much writing, but the teaching of neurology and psychiatry remained as it was from 1885-1891. That year I was nominated as a university professor in psychiatry and neurology, and in that year a new element appeared. Prof. Von Eiselsberg was appointed the Chair of Surgery in Utrecht. We were great friends; we had in many respects a common opinion upon general medical education; we had both stipulated, before our appointment, the necessity of a new clinic.

We now made a preliminary scheme for a combination of two clinics, one for surgery and one for psychiatry and neurology. We argued that the director of each clinic must be the professor, who should decide on admission or discharge of patients, and be chief in all things regarding nursing and treatment, but an adjunct-director, relatively independent in administrative, technical and financial affairs, could manage the complex of buildings. He, however, was responsible to the professor, and in cases of difference of opinion between those two the Curatorium of the University had the last word.

The new scheme was adopted, and now all seemed to go well. The President of the Curatorium of Utrecht, Mr. Roels, put his shoulder to the wheel, and three months afterwards the government was willing to build the clinics if the municipality of Utrecht would give the building site to the State. Utrecht always had a great love for its university. We found a strong protector in the Lord Mayor of Utrecht, Mr. Reiger. The building site was granted. Von Eiselsberg and I had audiences with the Home Secretary. His Excellency came to inspect the locality in Utrecht, and in 1892 all seemed to be ready.

Unexpectedly, however, difficulties arose. The architect who had worked out our plans had made a small mistake. Probably he did not exactly know the boundaries of the building site granted by the municipality to the State. The plan of the building exceeded these, and neither Eiselsberg nor I had seen the mistake.

The government refused to change the plans, and asked from the municipality legal expropriation of the small patch of ground that was needed. There arose other difficulties between the State and the municipality. Endless negotiations followed in 1892-1895, without any progress. Then, after ten years, I lost patience. In September, 1895, my opening lectures, I once more described the insufficiency of the instruction in psychiatry and neurology, as it

was given now, and I announced that if the budget for 1896 would not allow a sum to begin with the building of the clinics, I would no longer bear the responsibility for this teaching, and would ask for my dismissal as a university professor. The outcome was that no money was granted. I asked for my dismissal, and got it.

If I now look back to this period, I confess that this was a great failure. It may be a warning to young men who have to defend a really important cause. One should never discuss publicly the difficulties with which one is dealing with persons incompetent to judge them, and such are students. There is something of *braggadocio* about it, which no governmental authorities will easily forgive. The man who most of all, at that time and afterwards, worked to get a clinic, the President of the Curatorium of Utrecht, Mr. Roels, immediately told me so.

I got my dismissal; Prof. Von Eiselsberg, now the eminent surgeon in Vienna, accepted a chair of surgery at Koningsbergen, and the plan of the clinics was withdrawn.

On the other hand, my dismissal had a useful result. Public opinion began to ask for adequate teaching in psychiatry and neurology.

Six months afterwards the Municipal University of Amsterdam called me to succeed the Lecturer of Internal Medicine, Prof. Hertz, but charged me only with the teaching of neurology and psychiatry. I got two clinics, one for psychiatry in the Third Pavilion of the Wilhelmina Hospital, containing the aforementioned insane patients, another for neurology in the "Binnen-Gasthuis," a hospital with 120 beds.

It was not exactly what I had pleaded for during ten years in Utrecht, but it nearly realized what I wished. I secured myself the help of Wertheim-Salomonsen, obtained for him a nomination as a university lecturer, and for eighteen years we worked together on the organization of education in neurology and psychiatry in Amsterdam.

Other universities profited by the difficulties in Utrecht. The University of Leyden took up the organization of this study. With the help of the municipality of Leyden, an old building in the neighbourhood, Endegeest, was reconstructed as a clinic, and in 1899 Prof. Jelgersma opened it as a university lecturer in psychiatry and neurology in Leyden. The University of Groningen followed. There it was necessary to reorganize medical education. The new reorganization plan, which was voted in 1898, now included a clinic for psychiatry and neurology. This clinic, however, was not opened by Prof. Wiersma until 1913, after the Utrecht Clinic.

The first new, really modern clinic was opened in 1910 by the free

University of Amsterdam. This clinic, under the direction of Prof. L. Bouman, was built by private means.

To Utrecht, however, I had brought confusion. It was impossible for any man to succeed me before a solution about a new clinic was arrived at. Instead of the withdrawn plan, another complex of two clinics, one for surgery and one for midwifery, was now proposed. After renewed negotiations about the building site, the disputed ground and more than that was yielded to the State. The influence of Mr. Roels, who never ceased to urge the necessity of a new clinic for psychiatry and neurology, succeeded in getting it voted with the two others in 1898. My successor then was found in Prof. Ziehen, of Berlin.

Whilst waiting for the final settlement the new lecturer introduced many improvements into the asylum—more room, more patients, and a larger budget for research.

Prof. Ziehen was a very learned man, a famous writer on anatomy, psychiatry, psychology and philosophy. In the matter of the new clinic, however, he listened to the voice of the judicial authorities. I knew that charming voice too well! It had also come to me. It whispered that there was a very easy way to get a new clinic, if the clinic was to be for forensic psychiatry and criminology, for students in law and in medicine. I always answered that certainly one of the tasks of a clinic was teaching forensic psychiatry to students in law, but that such teaching did not essentially differ from the ordinary teaching of psychiatry. I meant that a new medical clinic for psychiatry and neurology would fulfil all their wishes, and asked their help to gain it. Then, however, came the foreseen response. A clinic for forensic psychiatry, built in connection with the prison, promised to be less expensive than a medical clinic. Its population with alienated criminals and with psychopathic elements, whose punishment is probational, would cost nearly nothing. Its building would prevent expensive building of new asylums for insane criminals, in combination with the prisons. There you had the "prison-asylum" recommended as a new but very good example of a clinic for teaching psychiatry!

The negotiations upon this rather unsound idea were in a far advanced stage when Prof. Ziehen, in 1904, left Utrecht to take a chair of psychiatry in Berlin.

His successor was Prof. Heilbronner, of Halle. To him belongs the honour of having built the clinic in Utrecht. His task was extraordinarily difficult. First, he has to break off the negotiations regarding the prison-asylum. Happily, he had seen the drawbacks of such an amphibious institute with Hitzig and Wernicke. Then he had again to defend the before-mentioned principles, for all correspondence

from 1885-1895 slept in the archives of the department, and was forgotten.

In a very short time his indomitable energy surmounted all difficulties. He made a new plan for a clinic of psychiatry and neurology in the immediate neighbourhood of the two for surgery and midwifery, whose building meanwhile had begun.

He got it accepted in 1907, and before the two neighbour-clinics were ready (in 1908, ten years after their being voted) he was also building his clinic. Within five and a half years, on May 16, 1913, Heilbronner opened his new clinic. He had fulfilled all his wishes. He was director of the clinic, had his house within the clinic, and could now work on a large scale, but he died suddenly on September 10, 1914. I succeeded him, returning to Utrecht, not only as a university lecturer, but also as Director of the newly-built Clinic of Psychiatry and Neurology. Perhaps the greatest praise that can be given to Heilbronner's work is that I, now nearly ten years Director of this clinic, have altered nothing in its main lines.

A clinic of psychiatry and neurology had to fulfil a double task:

- (1) It had to secure the best possible care for nervous patients, and to offer them the best chances for recovery. It had to be the model institute for therapeutics for the four southern provinces of Holland.
- (2) It had to give teaching in psychiatry and neurology.

Those different interests require separate arrangements in the building, which are provided in the following way: All patients are nursed on the ground floor. This has the advantage of preventing most forms of suicide, but the drawback that patients can escape easily.

All scientific installations, all laboratories for photography, röntgenology, anatomical and chemical research are on the first floor. There, and on the higher floors, are accommodated house doctors, administrative offices, nurses and servants.

The place where the two interests meet is the lecture-room, built between the wards, on the ground floor.

The plan of the clinic is simple—a blend of the corridor system and the pavilion system.

A long central corridor, 3 m. broad, divides the clinic in two. On the right side are men, on the left, women. Three corridors, crossing the main one, give admission to the wards. In this way you find each part of the clinic divided into three: Division I is for neurology; it has twenty beds for men and twenty for women. Division II for neuroses, psychoneuroses, and quiet alienated patients, has on both sides fifteen beds. Division III, for the restless insane, also has fifteen beds on both sides. The medical staff is composed of the professor, two external assistants and five house doctors. Each

neurological division has its own responsible house doctor. Wards II and III are united, and have together their responsible doctor. The fifth being the youngest house doctor is initiated by the others, and helps in the dispensary. The functions of the house doctors change by rotation; their average in the clinic is for two years. One external assistant, *chef de clinique*, and responsible directly to me for all patients in the wards, is permanent, and resides out of the house. Another is the *chef de policlinique* for all things regarding the dispensary, lives outside. Each house doctor has in addition to his work in the wards a definite scientific task. He is also responsible for a laboratory. There is one for anatomical, another for chemical-research, a third for photography and photomicrography, a fourth for röntgenography, a fifth for röntgentherapeutics, and so forth.

The nursing is done by two head-nurses (one for the male, another for the female wards), six first nurses, one for every division, thirty-two nurses and twelve attendants. No male attendants are admitted to the female wards. Male patients are nursed partly by women and partly by men, but the first nurse in every division is a woman. The administrative staff is responsible to the professor, but its chief, the adjunct-director, on principle not a medical man, is independent in all technical, financial and administrative affairs.

Responsible to the adjunct-director are :

(1) The office-staff, composed of (a) an accountant with his typist. All financial affairs pass through their hands. (b) a chief clerk with his typist. His field is all medical correspondence, the archives for the *historiæ morbi*, and so on.

(2) The household, conducted by a female officer, controlling the chief of the kitchen, the chief of the linen-room, with her needle-women, the chief servant with two attendants and twenty-two servants.

(3) The technical office. A chief technical functionary controls all technical installations, helped by an electro-technician and an amanuensis.

The clinic has central heating, its warm water supply and laundry-power being derived in common with the three clinics from a central installation.

Now, before entering the wards, one meets in every division, consequently six times, a system of eight rooms. Four of them are reserved for the reception of patients. Each new patient is received in the *bath-room*, is cleaned there, dressed in hospital clothes from the *store-room*, and leaves his own clothes, after disinfection, in the *cloak-room*, where they are kept until his departure.

The patient is then brought to the *examination-room*, where all instruments for a thorough examination are to be found. As a rule no examination is made in the wards, but patients are taken to this

room, where they are seen by the house doctor, or by the students on duty in the clinic.

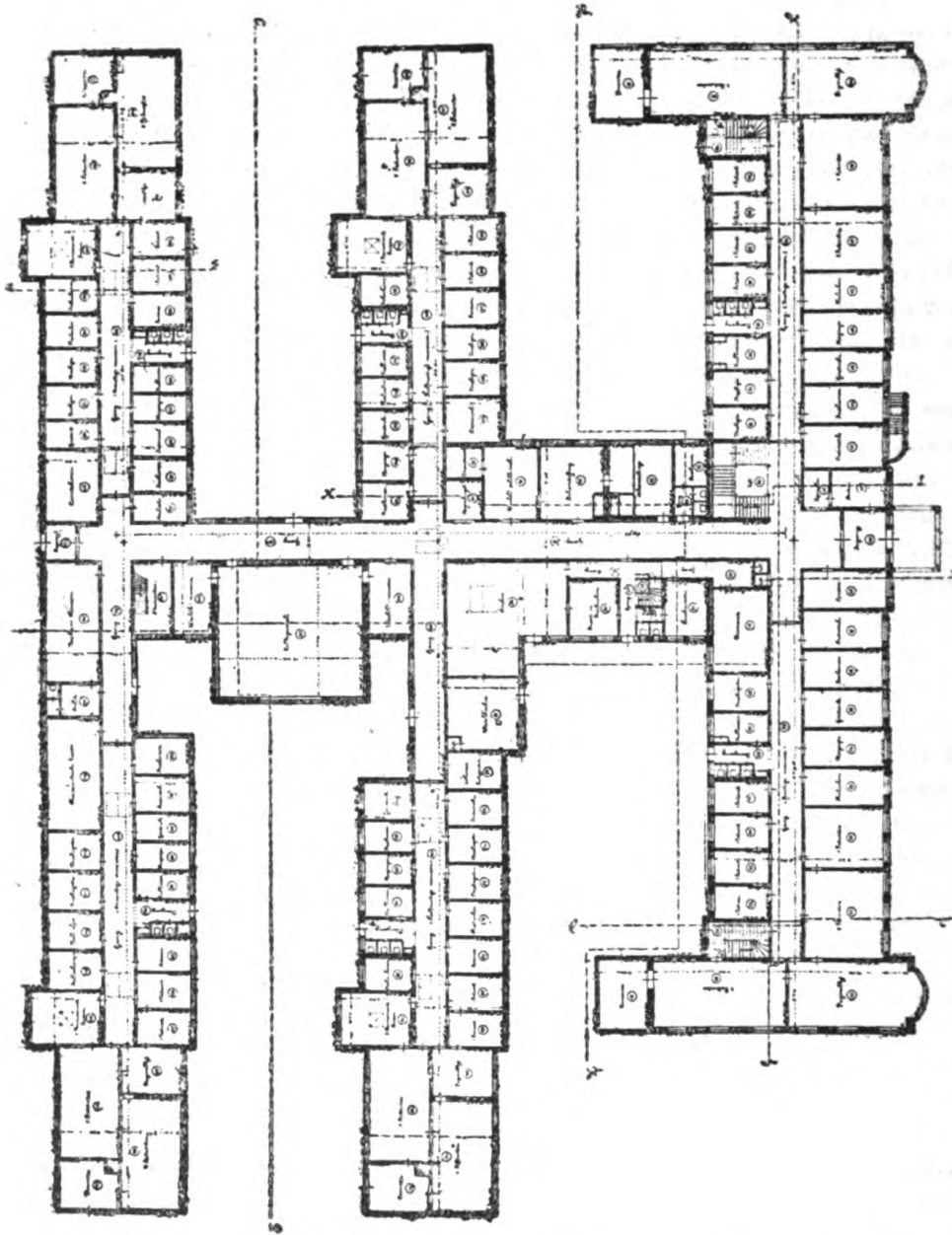


FIG. 1.—Plan of the ground floor of the Clinic of Psychiatry and Neurology of the Utrecht University, containing the wards, the kitchen installation, the dispensary, the lecture room, the operating room, and the rooms for hydrotherapy, etc.

Two other rooms are reserved for administrative aims. One, the *tea-kitchen*, is for the distribution of food, which is not allowed to be done in the wards. Another, the *linen-room*, receives the dirty linen. The clean linen is kept in the store-room. In each division the first nurse and an attendant-nurse sleep. Two *bedrooms* are reserved for

them. If necessary, the nurse on duty in the wards can rouse by an electric bell the first nurse and the attendant, sleeping in the division, or the head nurse or the house doctor. If necessary the house doctor calls the professor.

The neurological Division I differs from Wards II and III. It contains three wards, two with six and one with four beds, all opening into a large dining and recreation hall, and communicating with a conservatory, surrounded by a platform and leading into a little garden, where in summer-time patients may be brought in their beds.

Moreover, there are four rooms for single patients. They can be arranged for paying patients, or used for a patient requiring isolation, and also for serious cases. It is advantageous never to have dying patients with others in the wards.

Warm and cold water supply are found in the wards. The lavatories are out with the wards.

The Divisions II and III are identically built, upon another scheme. Again, the eight rooms, mentioned above, are found here. They have only two wards, each for five beds (that may be increased to six), opening into a dining room at the one side and a recreation room at the other.

These two wards are separated by large sliding doors, and can be occasionally used as one ward. At the end of the sliding doors is the w.c., in the middle of the two wards, placed in a corner. The front is shut off with curtains. The nurse or attendant can see at all times what happens in the closet. This solution of the closet question was a hobby of Prof. Heilbronner, and it has proved to be excellent. To the wards is added a system of three small rooms, each for one patient, communicating one with another, and with the main ward. In this way one nurse can supervise all patients in the ward.

In these divisions is found an isolation-room which is scarcely ever used, and a room for three permanent baths, which is very often used.

All these divisions are surrounded on three sides by small gardens. The kitchen installation is found between Divisions I and II on the female side. Opposite to it on the male side is found the dispensary. It comprises of (1) a waiting-room for patients, (2) a doctor's room for receiving them, (3) two large rooms for examination, in which, separated by curtains, five patients may be simultaneously examined, (4) a room for ophthalmoscopy, and (5) another for laryngoscopy and otoscopy. The dispensary is visited by 1,500 new patients a year.

Between Divisions II and III on the female side is the lecture-room. It is 12 metres by 12 metres, flanked on each side by a small waiting-

room for patients who are to be demonstrated. It has an amphitheatre for 145 students, leaving a large space for the lecturer and the patients. In the midst of the amphitheatre is a sciopticon, used for diascopy, epidiascopy, microscopic diascopy, and films. A single movement of an electric handle draws a black curtain forward and darkens the whole room within a minute. The lecturer can show his slides or films at any time he likes, and go on with his demonstration in full daylight the next moment. The students enter at the back of the building, they find their cloak-room next to the lecture-room, mount a staircase to the top of the amphitheatre, where their entrance to the lecture-room is found. At the back of the clinic are also found a series of rooms for therapeutic purposes: (1) An operation room, where lumbar and brain-punctures and other small operations are done (all major operations, on brain tumours, laminectomy, etc., are done in the neighbouring clinic for surgery). (2) A series of rooms for mechano- and hydro-therapeutics, violet-rays, diathermic treatment and chemical baths.

Now, leaving the ground floor one finds at the front entrance the lift, surrounded by the main staircase. As the wards are on the ground floor, floors are found above the neurological divisions only. There are three floors. The first contains the rooms for directors and doctors, for the office and laboratories. The second is reserved for nurses and attendants. To the right, again, the men, to the left the women. The third is occupied by the servants.

The first floor has in the middle the rooms for the director, for the adjunct-director, and the office. To the right is the residence of the house doctors, each of whom has a bedroom and a study. They have their meals together in the dining-room, combined with a recreation-room.

The scientific installations are found above the women's neurological division. There is a series of rooms.

(1) The library: Two large rooms. One is reserved for periodicals, the other for books and reprints. Heilbronner's and my own library were given to the clinic. They complemented each other. Heilbronner's periodicals were mostly German and Austrian; mine were mostly American, British, French and Italian. Now we have a hundred periodicals, 500 books, and nearly 5,000 reprints.

The question of the library of a clinic is a very difficult one. The Central University library always tries to absorb it, and yet a clinic cannot do without a complete and extensive library, because at any time books may be needed. I have a librarian, a lady skilled in all cataloguing work, and there is much work of that kind in the clinic—for the *historiæ morbi*, the collections of macroscopical anatomy, of microscopical series, and histological preparations, of Röntgen

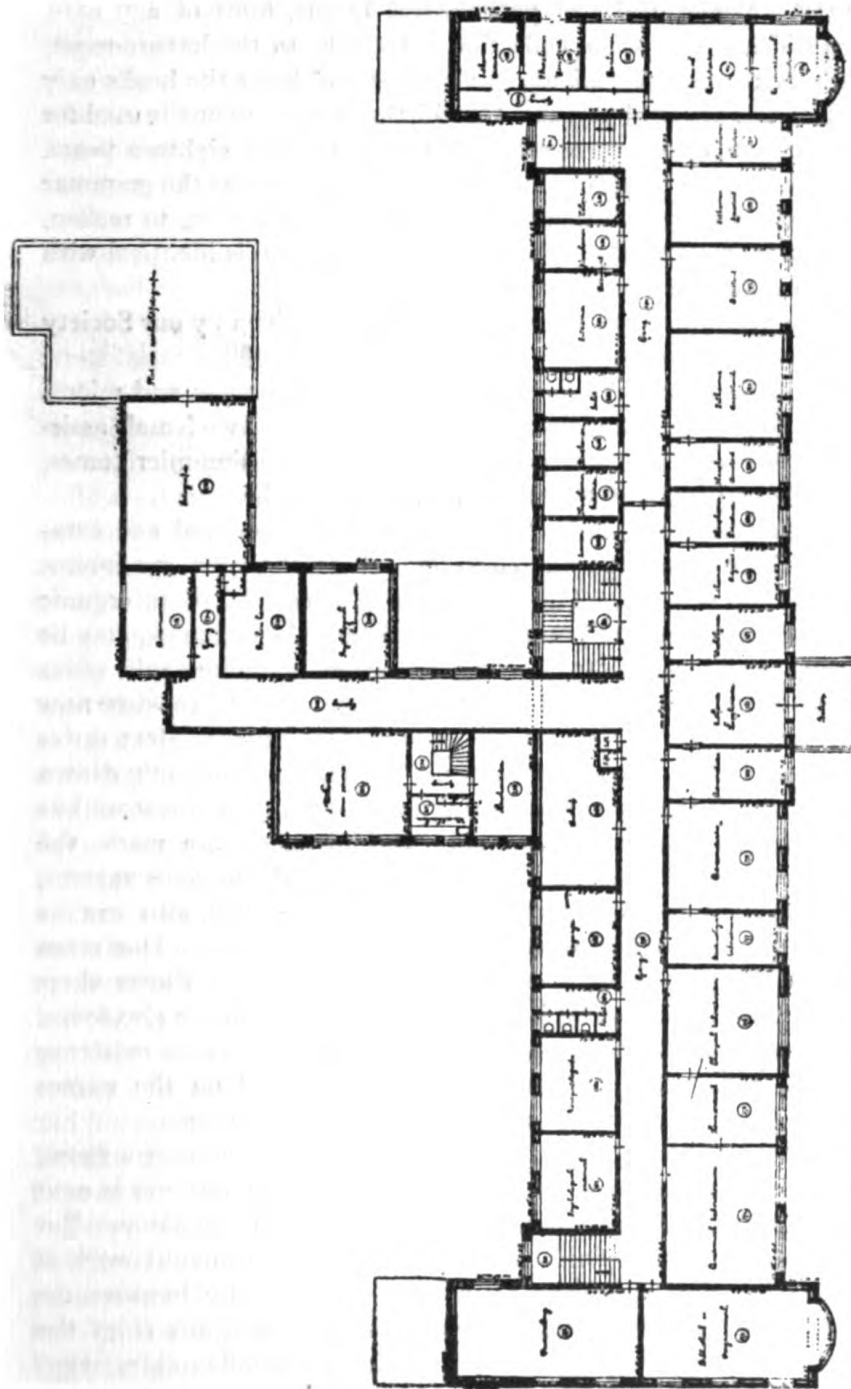


FIG. 2.—Plan of the first floor of the Clinic, containing the rooms for scientific research on the left. The library, the laboratories for anatomical, chemical, experimental and physiologic research, the rooms for Röntgenologic diagnosis and therapeutics, the installations for photo-micrography and photography.

photos and of photos from pathological cases, of microphotos of lantern-slides and films, all have their own card-system catalogue. The librarian catalogues all. Within ten minutes you can have all

you need. Books, slides of pathological brains, films of any case, lantern-slides. The whole collection is brought to the lecture-room. The library admits all students in medicine and lends the books only to doctors on the usual terms. One of the library rooms is used for the instruction of young nurses. We take them at eighteen years. They have by then forgotten most of what they learn at the grammar school. We again teach them to write intelligible Dutch, to reckon, as far as they may need, and their first examination is identical with the final examination of the grammar school.

In three years they can take the final diploma given by our Society of psychiatry and neurology.

(2) The laboratories for anatomical work, macroscopic and microscopic: A large room is appropriated for microtomy. Two female assistants are always working with paraffin, celloidin, or freezing-microtomes, making the preparations which are wanted by the investigators.

All pathological material that comes to us is preserved and catalogued. There is a museum collection of macroscopic specimens, nearly 300 in number. The macroscopic aspect of most organic diseases, and even of rare pathological and teratological cases, may be demonstrated at the lectures. My collection of microscopic slides of experimental, pathological and teratological objects consists now of a million slides. The whole collection is catalogued. Most series are prepared on 8 by 8 cm. glass plates. They are often directly drawn on the screen by the sciopicon during the lecture. Each disease has its own map. Microscopic anatomy and histology are made the basis of neurological teaching. The histology of the nervous system, demonstrated by microscopic projection on the screen, also has its own catalogue. I myself, with my wife, control this part. One room is reserved for the drawing of preparations. Dr. Ada Potter there draws her artistic designs for her atlases. In this room are also found the archives of the *historiæ morbi*. In the ten years of its existence there have been collected 5,000 dossiers, catalogued on the names of the patients; there is also a catalogue of their diseases.

(3) The chemical and experimental laboratories have each a room. To save time, and because the central laboratory for hygiene is next to the clinic, Wassermann reactions are not made in the latter. But all reactions on lumbar fluid are done there. Experimental work of late years has not been done on a large scale, chiefly because the clinic has not sufficient kennels, and must borrow them from the surgical clinic, where large kennels exist for rabbits, cats, dogs, monkeys and sheep.

(4) The laboratories for experimental psychology were under the care of Prof. Roels during eight years. But as the work of this department became larger and larger, the laboratories were removed

from the clinic, and a few months ago Prof. Roels got his own laboratory on a larger scale in the neighbourhood of the clinic.

(5) The laboratories for röntgenology are divided in the Röntgen room for diagnostic purposes and for röntgentherapy. Dr. Stenvers has the control of them. He made there his studies on the petrous bone, and his photos of the labyrinth.

The installation is so arranged that even unconscious men are brought into the rooms without leaving their beds, and are photographed or treated with X-rays. This is a very important department. At the time I came to the clinic I had three X-ray photos a week, now I have three to five every day. Its catalogue is very difficult to make, but my librarian has solved most difficulties, and now I can compare within a few minutes an X-ray photo made eight years ago with a recent one.

There are some kinds of brain tumours, all inoperable, which certainly are influenced by X rays, but we know not why, and recently have been busily studying the action of the rays upon the nervous system.

(6) The laboratories for photography are found in three rooms. One large dark-room, with a laboratory servant skilled enough to make simple photos, and to develop them, is in the centre. A small room for photomicrography, and a large photographic atelier, permits of making photos, lantern-slides and films of all pathological, living, and dead material. In summer, films are made in the sun on a large platform in the open air, next to the atelier; in winter a corridor of light is used, composed of one Jupiter lamp in the middle and at each side three lamps of 1,000 candle-power.

The collection of lantern slides is kept in the lecture-room; the collection of pathological photos, films and microphotos is catalogued in the atelier.

Now, any theme with which the lecturer deals can be illustrated, not only by patients actually in the clinic, but also by lantern-slides or films from patients who have been there, and from macroscopic and microscopic material of the *post-mortems* concerning their diseases. Thanks to the catalogue system, the lecturer can prepare his lecture in a very short time.

Every week the lecturer's hours (seven) are disposed of as follows: One hour is given to elementary psychiatry for the first-year clinical students; he demonstrates elementary symptoms, treats theoretical problems of psychology, but always in direct connection with patients. For one hour the lecturer demonstrates clinical cases to second-year clinical students. The third hour is given to forensic psychiatry for students in law and medicine. On the same scheme theoretical and practical neurology is treated for two hours every week. Two other hours are given as dispensary hours. The second-year student under

control of the lecturer examines and discusses the new patients on their entering the dispensary. After two clinical years the student passes a theoretical examination in internal medicine, psychiatry and neurology, surgery and midwifery. In the third year he comes to the wards, has the title of co-assistant, makes out the *historiæ morbi*, and is during one month the whole day in the clinic. As we have to deal with 100 clinical students each year, there are always ten co-assistants in the wards. The final examination consists in making out at least two *historiæ morbi* of neurological and psychiatric patients, discussed with the examiner. The first part of the final examination deals with internal medicine, psychiatry and neurology, and children's diseases. The second part includes surgery and midwifery, but the student is not admitted without bringing forward testimony indicating that he is sufficiently prepared in ophthalmology, oto-laryngology, gynæcology, venereal diseases and dermatology. He is now qualified as a general practitioner with the title of "arts." The title of doctor of medicine is a scientific title. It can be gained by writing a thesis, upheld and discussed before the Senate of the University.

Now, before concluding, I have to say a few words on the admission of and discharge of patients from the clinic. The main channel of recruitment is the dispensary. It brings every year 1,200 new patients. The dispensary is free. Formerly the admission to the clinic was also free, but since the economic difficulties everyone has to pay. To this is added the recruitment from my consultation hour for paying patients, about 200 a year. Everyone, rich or poor, entering the clinic, knows that the clinic also exists for teaching purposes. So far the use of paying patients for medical education has never created difficulties, but it requires tact on the part of the director. Another source of supply of patients is the mutual arrangement between the different clinics. All restless patients found in any clinic can be brought without any formality into mine. Fever-delirium, post-operative or puerperal psychoses are received in this way. On the other hand, all infectious or internal complications, all surgical cases, all incidental parturitions, are transferred to the other clinics. With the surgical clinic the contact is very narrow. All patients found unconscious pass to my clinic, directly, if no external lesion is present, but are first bandaged in the surgical clinic, if external lesion exists; they all come to me first to decide upon neurological indications for eventual surgical intervention on the skull in fresh traumatic lesions. Then the medical service of the municipality of Utrecht brings to the clinic patients found in alcoholic delirium, epileptic, or wandering in the street, and the police bring there, without any formality, alcoholics, or paranoiac men threatening or injuring their families.

One may ask if I have the right to retain such patients against their will. The measure is so salutary for the patient and his family that I never discuss it. Without doubt I have the right to declare these patients momentarily insane, and to ask legal authorization to send them to an asylum, which never is refused. But I ordinarily do not. In this way nearly all transient psychoses recover in the clinic, without the stigma of having been insane. Querulant men or chronic alcoholics may cause difficulties. They, however, know too well that if I send them to an asylum they usually remain there much longer than their average residence in the clinic.

But above all, the co-operation with judicial authorities is necessary. It is useful for both parties. I will give you one experience. It happened to me in Amsterdam, where the same principles were applied for admission to the Wilhelmina Hospital. On the eve of a serious strike the cutting off of electric- and gas-supply was feared. The authorities knew it, but so did the habitual criminals. Their well-known boarding-houses were overcrowded; they were coming from all parts of the country to Amsterdam. One of our best criminologists, then Public Prosecutor in Amsterdam, and I made a list of them. We knew a great many of them, for they mostly had been previously in asylums. In the following week the police brought them, if seen in the street, to my dispensary, as they were under suspicion of relapse of insanity.

I took them into observation in the clinic, and retained them there until the above-mentioned danger had passed. Nobody ever knew that it was not the need of medical treatment, but that of protection of the public that brought about their admission to the clinic. Such need must remain very exceptional.

But co-operation between the courts of justice and the clinic is not exceptional. The supply of accused persons still under trial, the supply of prison psychoses, is necessary for teaching forensic psychiatry. Therefore the director of the clinic takes the responsibility that such criminals will not escape. It is not so difficult as it seems, because dangerous criminals in prison are mostly easy patients in the clinic. Yet it is a grave responsibility, and it demands much care on the part of doctors and attendants. Happily, I have never had an escape.

The clinic also has relations with the military medical service. During the war, in mobilization time, the clinic received the insane from two southern divisions, (100,000 men). Half of the clinic was filled by them. They were mostly hysterical psychoses of a very peculiar character, for examinations before entering the Army had eliminated most of the severer diseases.

For the supply of idiots, imbeciles and psychopathic children, the

clinic is in relationship with schools and reformatories. Ordinary schools send their feeble-minded and idiots to a denominational school. But before entering this they must be tested. By mutual arrangement the testing examination takes place in the clinic. There it is decided if they shall go to idiot-schools or to schools for feeble-minded. The reformatories in the neighbourhood send all the incidental psychoses—and they are many—to the clinic.

From these different sources patients are always abundant, even recently, since payment for maintenance was instituted. The greater difficulty, however, is how to get rid of patients. In the short interregnum between Heilbronner's death and my coming, the clinic was managed by the house doctors, and it was wartime. In those three months the number of its patients increased to 120, nearly all psychopathic cases.

The house doctors were not firm enough to resist different authorities, who misused the clinic as an institute for poor-relief. This lasted six months, and demanded an enormous correspondence before these patients were discharged in different directions.

To prevent overcrowding in a house of passage, as the clinic to a certain extent is, it is necessary to have friendly relations with the asylums, sanatoria and hospitals for chronic diseases in the neighbourhood. My clinic is on the best terms with these. Though the provincial asylum is bound to take all insane of the municipality of Utrecht, all pass through my clinic. Mutually, asylum and clinic give each other many facilities. Patients going to the asylum take with them an extensive *historia morbi*. The clinic offers its services for the autopsies of the asylum. The asylum takes students, co-assistants, to work there, if their number is more than ten. Actually, there are always two to four co-assistants working in the asylum. The asylum allows interesting patients to be brought back for some time to the clinic. Similar facilities are got from, and given to, hospitals for chronic diseases. In this way the average time of residence of a patient in the clinic is no longer than three weeks, notwithstanding many of them remain there many years.

At the present time the clinic requires to be defended against many measures of economy taken by the State. Not only in Utrecht, but also in Groningen, where the new clinic is built on the same lines, these measures are painfully felt. Most, however, in Leyden, where the building of the new clinic, nearly finished, has been suddenly stopped, because there is no money.

Nevertheless, I believe that, however difficult the times may be, clinics, being centres of medical education and therapeutics in nervous diseases, will not easily be abolished. They belong to the essentials in a State.

The Psychology of Adolescence. A paper read at the Casual Society, December 6, 1923. By Sir FREDERICK MOTT, K.B.E., LL.D., M.D., F.R.C.P., F.R.S.

THE period of childhood which precedes puberty and lasts about three years is one in which growth, both physical and mental, is slower than at any time until near complete maturity. The child has reached a point of stability, and of almost complete adaptation to its environment. The dawn to the full development of the function of reproduction occupies four to five years, and during this period, and coincident with the formation of the secondary bodily sexual characters, there is a complete mental revolution peculiar to each sex.

A new and potent source of psycho-physical energy comes into being; consequently circumstances and influences which promote or antagonize the normal evolution of pubertal development will exert a profound influence on the mind, the effects of which will leave a lasting impress upon the conduct and character of the individual.

The period of adolescence has been the inspiration of the poet, the dramatist, and the novelist. An investigation of Shakespeare's characters has shown that he centred his attention on this period of life, and that his adolescents are by far the most interesting of his characters. Undoubtedly men delighted Shakespeare, and women also, but, as Mr. Gosse says, "the chief problems of life seem to lurk for Shakespeare in the souls and lives of men, and therefore he was more profoundly interested in the natures of men than in those of women. Shakespeare's men have a history, a moral growth or moral decay; his women act and are acted upon, but seldom grow and are transformed." We get from Shakespeare no history of a woman's soul like the history of Romola, or of Maggie Tulliver (*Mill on the Floss*), or in the diary of Marie Bashkirtscheff.

THE THEME OF THE NOVELIST AND DRAMATIST.

A constant theme of the novelist and dramatist centres around the chances and circumstances attending the discovery of one another by two adolescents of opposite sex. The sentiments and passions aroused by the struggle of the love instinct with the egoistic and social instincts have nowhere been more forcibly portrayed than by Thomas Hardy in many of his novels, but especially in *Tess of the d'Urbervilles* and *Jude the Obscure*. In *Tess*, the author graphically depicts the struggle between the moral and the sex instincts. But fate was always against her; for first, chance, and then later circumstances

over which she had no control, turned the balance in the struggle against the protective urge of the moral instinct, with tragic results for Tess.

In *Jude the Obscure* the novelist portrays a youth obsessed at puberty and onwards with day-dreams of becoming a scholar at Christminster (Oxford), how at first he strives alone to learn Latin and Greek, but later, upon grasping the realities of life, he conceives a way of attaining the goal of his ambition. Becoming apprenticed to a stonemason, he hopes, when he has acquired the craft, to obtain employment in the University town, and then the opportunity will arrive by which he will be able to imbibe its learning. At the age of nineteen this self-taught youth is approaching the time when his apprenticeship will be completed, and he is filled with hopes that his ambitions and dreams may one day be realized. The vital egoistic urge which he has consciously trained, directed, and controlled, however, is suddenly overwhelmed by a more powerful antagonistic urge—the sex instinct—which by a fateful chance is first aroused from the involuntary unconscious depths of his nature by meeting with a sexually attractive woman. This event which opens the tragedy is described in the two following passages in the novel :

“The unvoiced call of woman to man, which was uttered very distinctly by Arabella's personality, held Jude to the spot, almost against his will and in a new way to his experience. It is scarcely an exaggeration to say that till this moment Jude had never looked at a woman to consider her as such, but had vaguely regarded the sex as beings outside his life and purposes. He gazed from her eyes to her mouth, thence to her bosom and to her full round naked arms, wet, mottled, chilled with the water, and firm as marble. ‘What a nice-looking girl you are!’ he murmured, though the words had not been necessary to express his sense of her magnetism.”

In her presence we soon find his nature transformed, and all his egoistic impulses are for a time submerged in the love instinct :

“An indescribable lightness of heel served to lift him along, and Jude the incipient scholar, prospective D.D., Professor, Bishop, or what not, felt himself honoured and glorified by the condescension of this comely, handsome wench in agreeing to take a walk with him in her Sunday frock and ribbons.”

PSYCHO-PHYSIOLOGY OF ADOLESCENCE.

I will now pass on to some of the psycho-physiological points in connection with the period of adolescence. Undoubtedly motives and conduct originate in the early periods of puberty from an unknown biological source connected with the evolution of the primal instinct of reproduction. The bio-chemical stimuli originating in the sex organs not only stimulate and energize all the cells and tissues of the body, affecting especially the endocrine glands directly, or through the autonomic nervous system, but they also arouse in the brain the inborn tendencies and dispositions peculiar to each sex, and their

mutual attraction for the supreme biological end of reproduction and the preservation of the species.

The evolution of the sex instinct in relation to human character and its biological foundation is of interest, and will now be considered. At puberty the mentality of the boy and girl at first presents no very notable difference, but soon a vague mental disturbance of which they do not know the cause arrives, and with it an awareness that something new has entered into their lives. Ideas, beliefs, and desires at first indefinite are experienced, leading to impulses and aspirations of which they are unable to appreciate the cause, and many impressions which previously only interested the perceptual and ideational faculties are now associated with vaso-motor and visceral disturbances. A biological phase of sexual evolution common to men and animals is shown by a desire for display, in the nature of self-adornment, love of jewels, ornaments, and dress, especially in girls. This is the dawn of the sentiments of pride and vanity. In boys pride of adornment is shown by the desire of wearing military uniform, of any other dress suggestive of combat or prowess in sport; combined with this desire for display is a love of praise, and of being noticed by others. Self-assertiveness or self-abasement in the presence of the opposite sex, and an *amour propre* which is easily wounded and followed by resentment is observable. Jealousy is especially a sentiment which arises in adolescence; it is, as Elliot in his work on human character says, one of the most powerful motive forces of human conduct. Novelists, dramatists and poets have depicted love turned to jealousy, and the involuntary emotive response of love turned to those of hate and revenge, although the outward expression of the passion by voluntary word or action may be suppressed. Nevertheless, as Shakespeare teaches, the mute involuntary expressions of love's tender spring cannot be simulated when carry-tale dissentious jealousy is in possession of the involuntary emotional mechanisms :

" This sour informer, this hate-breeding spy,
This canker that eats up love's tender Spring,
This carry-tale dissentious jealousy,
That sometimes true news, sometimes false doth bring ! "

But it must not be supposed that jealousy is concerned only with the love instinct. This passion may arise from a wounding either of the egoistic or of the social instinct. Alphonse Daudet, in the novel *Fromont Junior and Rissler Senior*, clearly depicts this, for in this novel we find Sidonie, a young girl of comparatively humble station, finding herself in early childhood in the companionship of a girl of good family, living in luxury and refinement. Her appetite for luxury and finery, thus grafted in early life on an inborn weak moral instinct, developed in adolescence all the baser passions, immorality, vanity,

jealousy, hatred, vengeance. In order to obtain her desires, she married a man, Rissler Senior, considerably older than herself, whom she did not love. He worshipped her and would sacrifice everything for her. He never doubted her fidelity, and humoured her in every way. She had a craving to attain a social status equal to that of her former friend, Clara, who had married Fromont Junior, the partner of Rissler Senior, but Society would have none of her, and her vanity, thus deeply offended, turned to jealousy of her friend Clara. She seemed, with all her false characteristics, to have possessed a powerful sexual attraction, and in the novel this is depicted with striking effect. First she attracted George Fromont, but business considerations led to his marrying Clara. She resolves to revenge herself on Clara, who becomes a happy mother, and she seduces George. Both her husband, Rissler, and Clara Fromont have indubitable confidence in the fidelity of their respective spouses. The former's mind is entirely wrapped up in the invention of a new printing machine, by which the firm of Fromont and Rissler, wall-paper manufacturers, will attain a pre-eminence in the trade. The once poor but now prosperous Swiss artist and inventive genius, psychically blind to his wife's extravagances and infidelity, worships her and supports her parents, also he helps another family, the Delobelles. Sidonie inveigles George from his wife, and induces him to spend vast sums of money in the purchase of dresses, jewels, carriages, houses, until the firm is on the verge of bankruptcy. The old cashier, Planus, informs Rissler of the real state of affairs, but the single-minded man will not believe, so that Planus thinks that he is a *mari complaisant*, and the two are estranged. At last in despair the cashier writes to Rissler's brother, who has a good appointment in Egypt, which he leaves and comes home determined to open the eyes of his brother, and to avenge his destruction. But Sidonie, exercising all her sexual fascination, seduces the brother and gets him to arrange an elopement with her. He writes an incriminating letter, which she, possessing, uses as a means of terrorizing him. In the end Rissler Senior's eyes are opened, and he tears the jewels off her and humiliates her. She still possesses the letter. Rissler Senior by dint of great frugality and perseverance restores the fortunes of the firm. But she avenges her humiliation by sending him the letter. This breaks him up and he commits suicide.

At the same time as the dawn of the sexual instinct, there is often a loosening of the ties of old affections, and its cause, being ill understood, often gives rise to a change in conduct and character. The adolescent often feels—he knows not why—that family affections are insufficient, and there is a need of the affections of others, which, not knowing how to seek and obtain, causes brooding and depression.

He becomes uncommunicative to the family, even about daily affairs. The unconsciousness that the cause of their trouble is this biological unsatisfied sexual instinct of attraction to the opposite sex often causes young people, and in particular girls, to devote themselves to religious observances, mysticism, or fanaticism, or the urge of the sex instinct may be sublimated along healthy lines of intellectual or æsthetic culture, industrial occupations, or outdoor sports, which are to be desired and encouraged. Parents are not sufficiently aware of these psycho-physiological facts and their biological significance.

At puberty fancy is awakened, and fantastic ideas and day-dreams arise in which the youth desires to play a romantic rôle of captor or hero, while the girl has thoughts in which she imagines herself the object of the desires of a *prince charmant*. This romantic building of castles in the air is an exaggerated expression of the sentiment of love, and its instinctive sexual source in the subconscious mind is revealed by dreams.

If the moral sense of the individual has been contaminated by suggestion or invitation, and sexual pleasures have been tasted, the youth frequently abandons himself without shame and without restraint to auto-erotism, or even sexual perversion. Sexual desire in the uncontaminated youth is at first obscure, consisting of vague longings, without fixation upon a particular object. Sooner or later, however, in the evolution of adolescence the desired object arrives, and the sexual impulse materializes and bursts forth in a flood of passion. There is a linking up of the old primitive instinctive and involuntary systems with the conscious voluntary system peculiar to each sex. This is well exemplified in the following lines of Cowper's translation of Milton's *May Day*, written by the poet in 1628, when he was nineteen : " Then it was that Cupid drew his bow at a venture, and smote the unsuspecting youth and pierced his unguarded heart."

" (with . . . quiver at his side)
Now to her lips he clung, her eyelids now,
Then settled on her cheeks, or on her brow,
And with a thousand wounds from every part
Pierced and transfixed my undefended heart.
A fever, new to me, of fierce desire
Now seized my soul, and I was all on fire."

In Stacpoole's *Blue Lagoon* is described a marriage according to Nature, thus :

" So happy in their ignorance were they, that they only knew that suddenly their life had changed, that the skies and the seas were bluer, and that they had become in some magical way one a part of the other. Dick had lost his restlessness, his wish to wander had vanished. He had no reason to wander ; perhaps that was the reason why. In all the wide world he could not have found anything more desirable than what he had. He would look at her for a long time together absorbed in thought admiring her. He breathed her as one does the perfume of a rose. Dick had suddenly stumbled upon love. His courtship had lasted only some twenty minutes ; it was being gone over again and extended."

The first effect upon the imagination of the youth of the woman he first falls in love with is that she is something divine, and an object to be adored. "Not my five wits nor my five senses can dissuade one foolish heart from serving thee." Things which belong to her may even be sacred and constitute for him true fetishes, whilst in her actual presence he may be timid and abashed.

The maiden is more at ease with boys in the early period of pubertal development, and her early aspirations are that she should be admired and preferred. The desire to be loved and cherished comes later. In the second stage of adolescence, the essential differences which characterize the two sexes are more clearly manifested.

All the differences of character dependent upon racial and familial ancestry begin to show themselves in the conduct of the individual.

The crisis of adolescence is expressed in the involuntary emotional system by vaso-motor disturbances, such as blushing when meeting the opposite sex. Conscious impressions arouse new and more elevated feelings, resulting in an egoism that regards at first serenely all obstacles to the pursuit of his dreams, ambitions, and desires. Frustration causes the peace of mind to give place to a turbulence which renders him recalcitrant, and causes him to regard all limitations to his liberty as insupportable. The psycho-physical energy of the sex instinct as it matures is displayed by boldness in desires and thoughts, and courage in actions.

The sentiments peculiar to the individual personality clearly and forcibly assert themselves by opposition to parental obedience, familial and social usages, customs and traditions and tutelary authority. Reproaches are not readily tolerated, and irregularities of conduct, which occur as much in the well-to-do as in the poorer classes, are not infrequent. By virtue of better nutrition in the well-to-do classes the sexual instinct develops earlier, and behaviouristic delinquencies consequently may occur at an earlier age.

THE DEVELOPMENT OF ADOLESCENCE IN THE MALE.

The psycho-physical energy of the sex impulse (libido) is manifested by an elated feeling of the personality. This is well expressed by Shakespeare, when Romeo, moved by his passion for Juliet, says :

" My bosom's lord sits lightly on his throne,
and all day long an unaccustomed spirit lifts
me above the ground with cheerful thought."

Contrast this with the intellectual, meditative, introspective and melancholic Hamlet. This elation renders a young man sensitive to flattery, and very susceptible to suggestion by the conduct of others, which excites his admiration and stimulates him to action. Moreover, the libido arouses in him aspirations for a new life, and he may

become thus the subject of numerous ambitious projects. Their fruition coming to naught, he readily passes from elated confidence to discouragement, and a natural healthy sublimation of the sexual urge may be transmuted into hypochondriacal mental preoccupations connected with the sex instinct, perversion, mysticism, eccentric conduct, or a spurious form of socialism may result. Not infrequently this marks the first stage of an adolescent insanity, which terminates in dementia. It may be truly said that an unforeseen psychic state may arise at this period of life, for the individual receives from the unconscious sphere impulses that reflection and judgment have not yet acquired the capacity to control and regulate. At first there is an abyss between his aspirations and their realization, between what he desires and proposes and his powers of accomplishment, and his hopes are often later dashed by disillusionment. In the development of character some people do not advance beyond this stage, and remain permanently unable to grasp the realities of life. This has been termed Bovaryism, after Flaubert's novel. But the normal individual, as a result of his experiences and his aptitudes, gradually develops his virtues and his vices, and the differences of types due to the multiform inborn racial and ancestral dispositions become more and more clearly pronounced and accentuated. We may take as examples, "Hamlet, the philosophical intellectual man of meditation, but lacking will power and resolution, and Romeo, the man of passion. Gosse, in his *Art and Mind of Shakespeare*, contrasts these two forms, the Romeo form and the Hamlet form, abandonment to passion and abandonment to brooding thought, two diseases of youth, each fatal in its own way. Hamlet is steeped in meditation, and we may contrast the hero of the one play, the man of the south, with the chief figure of the other, the man of the north." Contrast Hamlet's friend, Mercutio, of brilliant intellect, wit, and effervescent animal spirits. Contrast the perfect love of Juliet and her Romeo with the piteous foiled desire for love in Hamlet and Ophelia. Contrast the passionate seizure upon death as her immediate and highest need, of the Italian wife with the misadventure of the crazed Ophelia, so pitiful, so accidental, so unheroic, ending in muddy death. Yet with all these points of contrast due to race, there is, Mr. Gosse affirms, "one central point of affinity between the plays. Hamlet resembles Romeo in his inability to maintain the will and the fruitful relation with facts and with the real world. Neither were able to grasp and control realities. Luck is for ever against Romeo, the stars are inauspicious to him, and to such men the stars will always be inauspicious." As for Henry V, they will always prove auxiliary, because he was able to see and control realities.

We see here the influence of race upon the development of adoles-

cence clearly portrayed. In "Romeo and Juliet," not only the substance but the forms of the language come from the south. Italy was the inventor of the tale ; she drew it from her national memorials, her old family feuds, her annals filled with amorous and bloody intrigues. In its accent, its blindness of passion, its blossoming and abundant vitality, in the brilliant imagery, in the bold composition, no one can fail to recognize Italy. Contrast the characters of both of these adolescents with that of Henry V, the man of action, who in his youth probably wisely preferred the wisdom and folly, the humorous wit and coarse vulgarity, the good nature and vices of Falstaff, to the intrigues, flattery, hypocrisy and vices of the Court. He saw the realities of life, so that when he came to the throne he was able to grasp and control them, become a King to his people, and consolidate his throne by marriage with a French princess. Every adolescent may be a potential reformer, for his mind has not yet crystallized the traditions, dogmas and customs of the herd, and he is thus able to strike out into new ideas and ideals. Adults desire reforms, but are too well aware from experience how little they can accomplish. Youthful initiative is the great agent of progress ; future greatness in the arts and sciences, especially in mathematics and music, and unusual ability is shown in early adolescence or before adolescence.

THE DEVELOPMENT OF ADOLESCENCE IN THE FEMALE.

In the female the course of development of adolescence presents notable differences to the male. Although she may be as sensitive as the male to impulses arising from the sex instinct, they exercise less effect on the intellectual side of her nature, but more on the affective : and motor reaction is inhibited rather than excited. Such is in accordance with the passive *rôle* of the female in the operation of the sex instinct. Whilst the adolescent male reveals his sexual tendencies to action by what he does, the adolescent female seeks to make obvious what she is.

The difference between the nature of young women and young men reveals itself in their delinquencies, and a comparison of causes of punishment in reformatory schools shows that boys and youths are punished more frequently for active faults, quarrels and theft, or attempted theft, whilst girls are more often punished on account of passive or negative delinquencies, such as laziness, negligence, or faults of propriety. There is one active fault which occurs in both males and females, and that is lying.

The passiveness of the adolescent female is only apparent ; it is the passivity of the magnet in its apparent immobility which attracts the iron which approaches it. The sex instinct of the female is in two forms, *vis.* :

(1) Amiability, which is an exaggerated form is coquetry; by this means she makes herself more noticed by men, and attracts them.

(2) Modesty, by which she ensures courtship.

Whilst the young man tends to rid himself of his rival by force, the young woman seeks to eclipse her rival by attractiveness. All that can serve to satisfy this disposition of making herself attractive is a natural feminine characteristic, and that is why in the most humble to the most elevated conditions of life at all times, and among all peoples, young women do not recoil before any means, and will submit to any form of physical discomfort or suffering to increase their attractiveness or supposed attractiveness. She pinches her feet in tight boots, pierces the ears, the nose, and the lips, to attach ornaments, and she brings to her aid, besides ornaments and physical attraction, emotional conditions which make her more interesting and attractive. Her emotivity, revealed by her blushes, her tears, her cries, rapid transition from joy to grief, all provide her with powerful means of enlisting sympathy; either the air of timidity or of caprice may be practised in a refined way to attract the attention of the opposite sex. The young woman has a more intuitive sense of danger, by quicker perception, than the youth; she trusts less to reason, and is more open to suggestion. Her sympathy is stronger, her altruism more disinterested. Her love more readily develops into devotion. The desire of the young woman to feel herself in harmony with society is more imperative than in the youth, who loves to combat and brave it through.

The young woman desires admiration, and in her deportment, in her dress, in her work, in her amusements, never forgets to consider the effect she will produce upon others who are looking on, even her own sex. This vanity is especially a feminine characteristic, but it has a biological origin and significance.

Another mental characteristic of female disposition is modesty, which is represented by shame in the moral order, and by virginity in the physical. It is by these qualities that courtship is ensured, and the maternal mission of begetting children by a man who will share with her the responsibilities of caring for them is effected.

Thus the amiability and attractiveness of woman has served to favour the primal instinct of propagation, her modesty has served to assure it. The development of the disposition of modesty of the female and the conditions which favour it has been a great factor in sexual selection, in social evolution, and the progress of civilization. The weakening of this instinctive female disposition of modesty is of national importance at the present time.

The tender emotion connected with the maternal instinct, so

beautifully and divinely symbolized by the "Madonna and Child," owing to the progressive development in all grades of society of the self-regarding sentiment, is greatly weakened. This is shown by promiscuous sexual intercourse and spread of venereal disease, late marriages, and the universal practice, except among the poorer Roman Catholic population, of contraceptive methods, one obvious remedy for which is the encouragement of early marriage of people healthy in mind and body, endowed with the three attributes of civic worth obtainable in all grades of society, *vis.* courage, honesty, and common sense. This can be effected by all such being able to obtain a living wage, and a decent home to live in, whereby a contented healthy couple can bring up a healthy and contented family.

Some Aspects of Dementia Præcox.⁽¹⁾ By EDMUND DUNCAN
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In the last few years a vast amount of research has been carried out on dementia præcox.

The investigations have been both psychological and pathological, and, as was bound to happen, two widely different theories of the causation of the disorder have been built up by these separate schools of thought, in order to explain the one set of clinical facts.

I shall endeavour in this short paper to sketch briefly the two points of view, and also to present to you evidence of a new one, based on the known pathology of this and other conditions, and on clinical observation.

The mental or psychogenetic theory of the disease is briefly as follows: humanity is divided into two main types, extroverts and introverts. The extrovert is not given to introspection, but allows his energies to flow out freely and to make contact with the world and with his fellow men.

The introvert, on the other hand, is introspective, his energies are easily turned back upon himself. Instead of extending his point of contact with other people, he allows himself, his aims and his ends to monopolize all his mental energy.

The extrovert is liable to be dissociated, and to exhibit hysterical symptoms, such as paralysis, amnesia, or anæsthesia, and so shelves his conflicts by putting himself out of action.

The introvert attempts to solve his conflicts, which, unsolved, may then go on working inside his consciousness. Dementia præcox

⁽¹⁾ A paper read at a meeting of the South-Eastern Division held on October 9, 1923, at the Croydon Mental Hospital, Warlingham, Surrey.

belongs to the introvert group. Some psychic wound, received probably in early childhood, has the effect of turning the patient away from the realities of life, so that his energies are turned back upon himself. He lives in a world of phantasy from which he refuses to emerge, and passes his days in a dreamy state in which he himself occupies a position of prime importance, and in which outside matters are beneath his consideration.

Hoch has shown by his researches into the histories of dementia præcox cases that the introvert character is not a product of the disease, but pre-exists it in a measure. Dissociations and eccentricities are present before the onset of the illness. This is a fact which is well known to every psychiatrist.

It is also well recognized that this character is markedly hereditary. The psycho-analyst claims that the youthful patient acquires this by imitating the behaviour of the eccentric parent on whom he has a fixation, so that he is enabled to start active life with a crop of mannerisms and mental peculiarities ready made. This statement does not explain the steady deterioration which is found in the psycho-physical make-up of successive generations of neurotic persons.

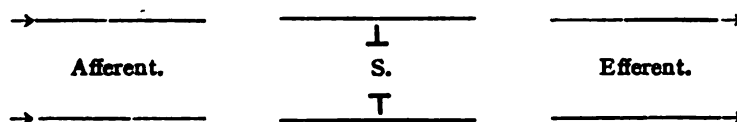
Another fact worthy of mention here which is well known to all workers among the insane is that psychotic and neurotic persons tend to gravitate towards one another and to mate together, and I have often observed that people exhibiting the same type of mental peculiarity are attracted to one another.

The psycho-analyst explains to us that this mutual attraction is a manifestation of the Œdipus complex, and that each party is choosing a mate who resembles, as far as possible, the eccentric or neurotic parent on whom the subject's libido is fixed.

The form of mental disorder which is likely to occur in any person depends upon his mental predisposition; *i.e.*, if he is an introvert neurasthenia or dementia præcox is likely to occur; if he is an extrovert, manic-depressive insanity or some form of hysteria is more likely.

Prof. William McDougall has evolved a theory to explain the physiological basis of extroversion and introversion.

This diagram represents the nervous system with the points of breaking between the units which compose it:



The junction "S" represents the whole system of cross-connections in the brain and spinal cord.

In the hysterical type the resistance at "S" to the passage of LXX.

nervous energy is high. If a further increase of resistance takes place, dissociation occurs. This is the extrovert type.

In the neurasthenic type, on the other hand, the resistance between the lateral connections is low and energy circulates freely in the nervous system. Thought is easy and free, and active intellects are inclined to neurasthenia. This is an innate peculiarity and must have a physiological basis. I shall refer to this theory again, and shall attempt to account for the variations of synaptic resistance in a satisfactory manner.

Dr. Jung and his school consider that the physical signs and mental symptoms of dementia præcox are entirely secondary to the mental complex which is at the bottom of the disorder. He agrees that the introverted predisposition is innate, and precedes the onset of definite mental disease, but he admits frankly that the nature of predisposition still remains a mystery.

Turning now from the psychological conception of the disease, let us glance briefly at its pathology.

Sir Frederick Mott, in a series of brilliant investigations, has examined the brains and endocrine organs of a number of dementia præcox cases of both sexes. His results may be summarized as follows :

In the brain the nerve-cells undergo marked changes at all levels. The nuclei of the cells swell up, then become crenated ; the Nissl substance is reduced to a little blue dust, the dendrites of the cells shrivel up and disappear. Lipoid degeneration of the cells may be demonstrated by suitable stains. Degenerations of the same type are found in the thalamus, at the synapses of the neurons and in all the ductless glands.

The testicle is in the same state of undevelopment as is that of a child four months old, except that the tubule is larger and there is a marked thickening of the basement membrane. There are no interstitial cells of Leydig to be seen, and no development of spermatozoa is taking place within the tubule, which is filled with primordial germ-cells. There is thus present a degeneration combined with failure to develop.

Much the same condition is found in the ovaries of these cases.

The glands are small, shrivelled and fibrotic. No formation of Graafian follicles is taking place, and only a few primordial follicles in various stages of degeneration are to be seen.

In a more recent communication Sir Frederick Mott has demonstrated that very marked changes occur in the suprarenal medulla in cases of dementia præcox. Here the cells are shrunk and there is great diminution of the cytoplasm, which in a large proportion of the cells has disappeared entirely, leaving their nuclei free. The

ratio of nuclei to cells is about $6\frac{1}{2}$ to 1. The gland is invaded by fibrous tissue, which forms quite a dense ground-work.

The way in which these pathological findings have been interpreted is as follows: The patient has inherited from his parents, who as a rule are either neurotic or psychotic, a nervous system which lacks durability, and which also is deficient in the power of regulating the growth and development of the reproductive glands.

Owing to this lack of durability, his nervous system is unable to withstand the stresses of puberty and of adolescence, and breaks down in this characteristic manner with all its endocrine sequelæ.

It may happen that the nervous system is sufficiently resistant to weather these two physiological storms, only to succumb later to such a strain as parturition or lactation or an acute infectious disease. Dementia præcox may in these cases supervene upon confusional insanity.

I shall now try to fit together a large number of pathological findings and clinical observations in an attempt to show that the principal causal factors of dementia præcox are to be found, not in the brain, but in the ductless glands.

Whitwell, in 1897, found in subjects suffering from myxœdema that the cells of the third and fourth layers of the brain cortex exhibited chromatolysis, loss of the dendritic processes, and destruction of the nuclei followed by a complete disappearance of the nerve-cells, whose place is taken by neuroglial tissue.

Alzheimer has demonstrated in the deeper layers of the cortex in cases of dementia præcox definite areas of gliosis.

It has been shown by Lorand and Perrando that congenital myxœdema may be inherited from parents who had induced degeneration of their thyroid glands by long-continued abuse of alcohol, or by lues.

Perrando has demonstrated independently a degeneration of the thyroid in the newborn infants of luetic parents.

Dr. Clifford White has recorded the case of a woman suffering from Graves's disease, who gave birth to a child who had the same disease well marked. The child lived only thirty-four hours, and on *post-mortem* microscopic examination, hypertrophy of the secreting cells of the gland with convolution of the epithelium was found.

Roger and Garnier have shown that all infectious diseases injure the ductless glands and especially the thyroid, which shows at first signs of over-activity, which are followed by those of exhaustion.

The chief psychical symptoms of myxœdema are slowness of thought, apathy, weak memory, and sleepiness; and in mild degrees of the disease, before it is fully developed, hallucinations, both auditory and visual, are not uncommon.

The ductless glands show a marked inter-dependence, and changes in one are rapidly followed by changes in others.

Thus Pineles and Lorand have shown that if an animal is given diabetes by extirpating its pancreas, signs of over-activity may be found in the thyroid. Dr. Walter Edmunds says—"Besides its symptoms, Graves's disease has two sequelæ—myxœdema and diabetes," and Prof. Murray has reported a case which bears out this statement.

Holst also has reported a case where partial thyroidectomy was followed by apparent cure of the diabetes. It has also been stated that children of myxœdematous parents frequently manifest the symptoms of congenital myxœdema or of infantilism from non-development of the sexual glands.

While I was making some experiments on dementia præcox cases with posterior pituitary extract about three years ago, I discovered quite unexpectedly that menstruation was re-established in all my female cases, some of whom had not menstruated for years. The extract is now used as a routine treatment in this hospital in order to restore the menstrual function in recovered melancholic and confused cases before discharging them. In this connection it is interesting to note that Prof. Dixon has stated that ovarian extract, boiled, filtered, and injected into a vein, invariably produces an increase of posterior pituitary secretion.

Dr. Walter Edmunds states that on feeding guinea-pigs with large doses of thyroid no marked changes were found in their thyroids, but the adrenals were much enlarged.

There is also a marked interaction between the glands in acromegaly—the sex-glands are subject to morbid changes which may even go on to complete atrophy; morbid changes are also found in the thyroid and adrenals in this disease. Cases have been described in which the symptoms of acromegaly developed in the course of Graves's disease, and in one case was associated with diabetes.

These observations would seem to indicate to us that—

(1) Primary diseases of the ductless glands are markedly hereditary in character, and acquired morbid characteristics are often passed on to the offspring in pure form.

(2) Disease of one ductless gland always affects the functioning of one or more of the other ductless glands.

(3) Degeneration of the thyroid gland brings about brain changes which are almost indistinguishable from those of dementia præcox.

(4) There is a very close resemblance between the physical stigmata and mental symptoms in myxœdema and dementia præcox.

Berman, of New York, goes further, and states that "internal secretion traits are inherited, and variations in heredity are essentially the structural representation of the resultant of a parallelogram.

of forces exerted by each of the parental prepotent glands. If they are of the same type they may reinforce each other ; if not, inhibitions and compensations will come into play. Mendelian laws may apply."

I have been much impressed by the close resemblance which exists between the mental manifestations of dementia præcox and those occurring in many cases of involutional insanity, and this fact has led me to seek for a cause common to the two conditions.

It has long been known that the nuclear changes in the cerebral cortex of senile cases are of the same type as those found in dementia præcox, and they have hitherto been attributed to deprivation of blood, the result of arterial sclerosis.

This explanation might account for the senile cases but it is obviously not applicable to the precocious dement.

Now we know that in involutional insanity, as well as in dementia præcox, marked degenerative changes take place in the sex glands. I therefore treated a large number of cases of both types with genital extracts and with mixed gland extracts with varying success.

The best results, as may have been expected, were obtained in the senile cases, a considerable number of whom were discharged recovered and have not returned to hospital.

Of the dementia præcox group, several cases were improved, and a few have been discharged, but the results on the whole have been very disappointing.

How are we to account for this failure? In searching for its explanation I was led to study the recent work of Prof. Steinach of Vienna and Dr. Voronoff of Paris, and I think that their discoveries point to the cause of my non-success.

It appears that the ingestion of spermatic substance has little or no effect in the way of influencing the other ductless glands ; it acts as a rather stimulating and easily absorbed food.

The tissue which is really important is the interstitial gland, and it is more than probable that this tissue is deficient in the genital extracts marketed by drug houses ; or what is still more likely, the hormone of the interstitial cells—if present in the extract—is destroyed by the action of the gastric juice.

In this connection it should be remembered that the hormone of another group of interstitial cells, *vis.*, insulin, is rendered valueless when given by the mouth, and is only efficacious when introduced directly into the blood-stream.

Might not the interstitial hormone suffer from the same disability? I think this is probably the true explanation of the mystery, for Voronoff, in his work on " testicular grafts," describes the case of an American gentleman who was suffering from the symptoms, both mental and physical, of testicular insufficiency. This patient had

been given two injections of testicular extract in New York, and on each occasion a marked though temporary improvement had been brought about.

He was afterwards completely cured by a testicular graft.

That the interstitial hormone has a very marked effect in removing the signs, both physical and mental, of old age has been abundantly proved by both Steinach and Voronoff.

Thickened arteries and fibrotic heart muscle, which had formerly been considered to be the *cause* of old age, have now been shown to be merely the effects of deprivation of interstitial secretion, and the condition of arterial sclerosis has been entirely cured in many cases by re-introducing the interstitial hormone into the blood-stream, and a great reawakening of the mental faculties has been noted. Energy, interest and initiative return to the patients, the memory improves in an extraordinary manner, and, what is still more wonderful, the conservative "stick-in-the-mud" attitude of the old person gives way to the progressive pushfulness of the young one.

Hitherto memory and mental energy have been considered an exclusive property of the nerve-cells, but it now appears that unless the nerve-cells are provided with their proper mixture of hormones, they are not able to function normally, and if the mixture is very deficient in important secretions, the nerve-cells are not able to function at all, and life becomes an impossibility.

Now it has been demonstrated beyond question that in dementia præcox interstitial substance is very deficient, and may, in old-standing cases, be almost entirely absent. We have also noticed the very close inter-relation between the thyroid gland and the sex glands, and we have observed that the pathology of the cerebral cortex in myxœdema bears a strange resemblance to that of dementia præcox; so close indeed is the resemblance that it is quite impossible for us to ignore it, and we cannot but come to the conclusion that the very similar mental symptoms of the two conditions are due to one and the same cause, and that this cause lies in the ductless glands.

Berman, of New York, whom I have already quoted to you, states that "certain diseases and disease tendencies, both acute and constitutional, as well as traits of temperament and character, and pre-determined reactions to certain recurring situations in life, are rooted in the glandular cells that compose the stuff of the individual."

And he goes on to affirm that not only the bodily conformation, but all the other mental and physical attributes of the individual, are entirely dependent upon the relative strengths of his ductless glands. This statement appears to be in harmony with the other facts which I have presented to you.

In an earlier part of my paper I mentioned Prof. McDougall's

account of the introvert and the extrovert, and showed you his diagram, which we may consider demonstrates the physiological facts in a simple manner. Now we have seen that the mental make-up of the individual depends entirely upon the balance of his internal secretions, and the organs forming these secretions have been inherited in different degrees from both his parents. Thus it would seem possible that introversion and extroversion may be determined by the excess or the lack of one or more of the internal secretions. Let us examine this proposition and see if there is any evidence to support it.

We have already agreed that the precocious dement is an introvert, and has been so from birth, for if he were not he would never get dementia præcox. We have also seen that he lacks interstitial substance. Now both Steinach and Voronoff, in their experiments on the rejuvenation of the lower animals and of man, have shown that when growth of the interstitial gland is stimulated in a subject in which it is deficient, his mental attitude undergoes a complete revolution. When an old rat, for instance, who before the operation was listless and took little or no notice of his surroundings, was examined some weeks after, it was found that his interest in his surroundings had revived, curiosity, pugnacity and the sex instinct were easily aroused—the rat, in fact, was exhibiting the behaviour of an extrovert.

So I think we are entitled to assume that one of the functions of the interstitial hormone is to maintain the resistance of the synapses to the passage of nervous energy in the brain at a certain definite level. Now, when the interstitial cells of an old man become deficient, we should expect an introvert form of mental disorder to occur, owing to the lowering of synaptic resistance; and the one which actually does occur most commonly is the presenile form of melancholia—a markedly introvert type. It is in this type of case, too, that great improvement may often be brought about by treatment with arsenic—a drug which, when taken over a long period, has the effect of causing degeneration of the seminiferous tubules, and stimulation and overgrowth of the interstitial portion of the gland.

It still remains for us to find an antagonist to the interstitial hormone—a substance capable of lowering synaptic resistance where it is too high, as, for instance, in confusional insanity.

Thyroxin, the active principle of the thyroid gland, answers our purpose admirably; its action as a mobilizer of energy, as a catalyst which speeds up the vital chemical reactions and transforms potential into kinetic energy is well known to us. I may add that it has largely displaced strychnine in this hospital in the treatment of mental confusion.

Thus it appears that two factors may act together in the causation of deep introversion—interstitial deficiency and thyroid hyperactivity.

Kraepelin has suggested that dementia præcox is caused by a toxin secreted by the sex glands. A more correct explanation probably is that the interstitial cells of the sex glands, like those of the pancreas, have an antitoxic function, and when the function of the gland is impaired, either by defect of development or by disease, the toxin is permitted to circulate unchecked.

It has also been shown by the injection of minimal doses of thyroxin in the goat that an antitoxin is developed which kills the animal in a fortnight. That this fatal action is not due to the poisonous action of thyroxin itself is proved by administering to a control animal in a single dose as much thyroxin as was given the original animal in the whole fortnight. No ill-effects are observed.

Now, what conclusions is it permissible for us to draw from the arguments which I have presented to you? It would appear that dementia præcox may quite possibly cease to be numbered among the mental disorders, and may find a niche among the deficiency diseases of the endocrine system, whose hereditary tendency is already well known.

The brain changes would then be secondary to those of the ductless glands, and would tend to become more marked as one gland after another in the chain breaks down.

In addition to the physical signs and mental symptoms of degeneration we are able to find clinically those of childishness, which should be attributed to undevelopment of the genital interstitial cells, which control the development of the secondary sex characteristics.

Changes in the thyroid and adrenal glands may be held responsible for the characteristic emotional apathy and circulatory weakness respectively.

Having allotted the chief blame to the interstitial gland, there yet remains the question of what we can do for these cases.

The natural corollary to my argument is, of course, "introduce interstitial hormone into the circulation."

There are numerous ways in which we may attempt to bring this about. The methods of Steinach and Voronoff have already passed through the experimental stage, and have been successfully applied in many cases of senility. Injections of genital extract may give an indication as to whether operation is likely to be of service or not.

There are also the X rays and ultra-violet rays, which may be used to destroy the external and promote the internal secretion of the gland.

I submit that we have here a fruitful field for investigation and

experiment, and I hope at some not very distant date to be able to communicate to the Association results of a series of researches which are only just beginning, and which I earnestly hope may in some measure help to improve the, at present, dismal prognosis of dementia præcox.

Mental Trends and Mechanisms, and their Relation to Disease considered in their more familiar Manifestations. By J. E. MIDDLEMISS, M.R.C.S., L.R.C.P., M.P.C., F.R.F.P.&S.Glas., Medical Officer to the Leeds Committee for the Care of the Mentally Defective; Neurologist and Specialist in Psychotherapy to the Ministry of Pensions, Leeds.

A CURSORY survey of the varied fields of human activity suffices to establish the existence of a fundamental rhythm, an action and reaction, an antithetical sequence as it were, by virtue of which the prevailing phase in any movement is inevitably and inexorably succeeded by its direct opposite. Manifestations of this periodicity or cyclical tendency underlying all forms of human endeavour abound on every hand. Peace follows war as night succeeds day; an age of feudalism and despotic rule gives place to one of democratic Government. The time-worn creeds and simple faiths crumble a little before the exigent demands of a higher criticism, and, even as we glow with triumph at the achievements of modern science, we feel the premonitions of new developments whose exponents care for none of those things, and speak not the language of an out-worn materialism. And here it may not be inapposite to remark that the science of medicine is by no means immune from this prevailing principle.

It is almost a heresy to recall it, but I seem to remember in my student days that the subject of functional nerve diseases was treated with rather scant courtesy—certainly not with the exaggerated regard which is accorded to it at the present time. In those far-off unregenerate days much was made of physical signs, and if a man laid claim to a disease he was expected to furnish ocular and tangible proof of the same. We have travelled a good deal since then—I think sometimes we have travelled too far. Be that as it may, it may be regarded as a generally accepted principle that a patient may suffer a very grievous disability of which there is little or no objective evidence, which is all to the good.

The present age is one of analysis (it is more, it is one of psycho-analysis), but it must be admitted that in so far as there is a coherent purpose in this paper, it is not to accentuate differences, but similarities, not to subdivide and partition, but rather to assimilate and

to synthesize. It is hoped that none the less some little light may be thrown on the more common mental mechanisms, though the attempt be made on lines a little divergent from those of the so-called "new psychology." It is an inherent disadvantage in the study of mental disorders that the whole course of these affections rarely comes under the purview of one observer, or set of observers. But for this, no doubt the relation between minor deviations of conduct not transcending the arbitrary definition of the normal and the fully developed psychoses would have received more attention. As matters stand, this, so to speak, cloistral method of studying the problems of nervous disorder considered in the broadest sense has resulted in a rather chaotic conception of the underlying factors, and to this unsatisfactory state of affairs many elements have contributed. Until the end-results of mental disorder are interpreted in the light of their earliest beginnings, and the potential significance of these early symptoms truly apprehended, the value of much of the research which has been undertaken must be seriously diminished. That some such unifying principle is beginning to operate there are now happily many indications. The artificial barrier which existed between neurology and psychiatry is breaking down, and we have now combined sections at scientific conferences in which both neurologists and psychiatrists participate to their mutual advantage. The establishment of psychological clinics attached to general hospitals at which the earliest stages of mental disorder may be studied, the State recognition of, and provision for the subjects of mental defect, the stimulating and revolutionary incursion of the psycho-analytical school of thought, and last, but by no means least, the new light which the study of the war neuroses has shed upon both new and old problems, have all contributed in their several ways to a new orientation, and a juster appreciation of the factors involved.

This much by way of introduction.

To come to our new mental trends. Let us consider for a moment the phenomenon presented by that very ordinary type of sufferer, the hypochondriac. Between the minor forms with which we are all familiar and the culminating manifestation of the disorder exemplified in hypochondriacal melancholia, the difference is, after all, only one of degree. Granted that, as in the case of most of the functional neuroses, the type is rarely pure, there would appear to be such a thing as a hypochondriacal trend. As the content of the total stream of sensations derived from the body, the so-called *cœnæsthesia*, may be regarded as more or less constant, it is necessary to assume one of two things in individuals of this type. Either the threshold of consciousness is lowered so that sensory impressions reach it which would not ordinarily do so, or the content of the bodily sensations,

visceral, muscular, glandular, kinæsthetic, etc., is predominantly painful, or at least unpleasant. There is something to be said for each of these views. The hypochondriacal tendency is generally manifest during the whole of the life-time of the individual, and as the influx of sensations derived from the external world varies from day to day and hour to hour, the only constant factor, and that which distinguishes him from other individuals, would appear to be this distinctive type of cœnæsthesia. Assuming for the moment that the aggregate effect of the intrinsic sensations is such as to produce a feeling tone of pain in the consciousness, it is clear that individuals of this type are unusually dependent upon external impressions for the maintenance of their feeling of well-being. For not only must such external impressions be in themselves pleasant, but also of sufficient intensity to neutralize the effect of the intrinsic or proprioceptive quota which, *ex hypothesi*, are predominantly unpleasant. Regarded from this point of view, the familiar reproach that the hypochondriac can always forget his woes when there is something pleasant in prospect loses most of its point, and all of its wit.

On the other hand, it must be remembered that hypochondriacs no more than other individuals remain at one dead level of mediocrity. The affection may be acquired. Conditions of bodily asthenia following physical disease, the epochal periods of life, adolescence, and the climacteric in both sexes are frequently precursors of the affection, and this in individuals who hitherto have shown little evidence of it. The influence of habit and environment are from the mental side equally suggestive. A child growing up in a neurotic household, where much is made of minor ailments, readily acquires the hypochondriacal habit of mind. The transient hypochondriasis of the medical student and sexual hypochondriasis are largely of psychic origin. The latter is particularly mutable in character, and is frequently camouflaged by symptoms derived from anatomically related parts of the body.

The relation of sexual hypochondriasis to anxiety states is sufficiently obvious, and the mechanism of symptom formation would appear to be somewhat as follows :

Following some sexual lapse, or appearing as it frequently does on the eve of marriage, and coincident with a general anxiety as to fitness for such a state, the genital zone acquires an undue prominence in the field of consciousness. Some slight real or fancied abnormality which ordinarily would have escaped attention is invested with an exaggerated importance, and thereby forms the basis for a group of symptoms. Or possibly some trivial deviation from the normal functioning of the urinary apparatus is associated with a long past sexual indiscretion, and serves as a nucleus for a symptom-complex.

In either case the essential feature in the production of symptoms is this background of anxiety, given which any pretext will serve.

It is significant that the neurosis is conditioned by the patient's mental representations of the supposed disability; hence its frequently vague and indeterminate character. Having incurred, for instance, the risk of acquiring venereal disease, and being unversed in its symptomatology, his neuro-mimesis is correspondingly hazy. As has been said, the logical culmination of the hypochondriacal tendency is an actual psychosis in which the falsely interpreted sensations form the basis for delusions, the content of which manifest the essential continuity in the underlying mechanisms. The delusional hypochondriac, for instance, no longer thinks that he may have such and such a disease, but this is now a *fait accompli*, and his whole mental attitude and conduct are henceforth determined by this fixed belief. It is to be noted that hypochondriacs of no matter what grade are not amenable to argument or logical considerations; the condition in all cases supervening on a depressed affective tone is only susceptible to influences which make an appeal in some sort to the emotions. The fact must, of course, not be lost sight of that hypochondriacal delusions may be based on actual organic disease of the internal viscera; the sufferer from cancer of the stomach, for instance, entertains the bizarre belief that he has an animal inside him which is gnawing at his vitals. Here, of course, it is a question merely of faulty interpretation of sensations which have an actual objective basis.

In striking contrast to the mental attitude just considered is that which underlies the so-called "spes phthisica." I say "so-called" advisedly, because I am inclined to think that it is not solely associated with tubercular disease, but is seen not infrequently in the subjects of malignant disease; nor, though I am unable to suggest a better term than the one in use, do I feel that it is quite adequate. In a fairly average experience of pulmonary tuberculosis I cannot recall many cases where it was not exemplified in some degree. The only exception which occurs to me is that of a phthisical lunatic with whom I was acquainted. The solitary hope he seemed to cherish was to terminate my career, and in the attempt to do so he displayed an ingenuity and pertinacity worthy of a better cause.

On the whole spes phthisica seems to me not so much a hope as a refusal to believe—what psychiatrists would call a "flight from reality." There is something specific and peculiar about the phenomenon. One is impressed at the outset by the incongruity between the physical condition and the affective tone. It is difficult to believe that these patients are altogether unaware of the dire nature of their malady. It is more likely that they recognize it but too

well, but unable to contemplate the prospect, make despairing and partially effectual attempts to banish it from consciousness. To compensate for the increasing physical weakness they invent, as it were, this fictitious feeling of *bien être* in a pitiable attempt to throw dust in their own eyes. In short, the whole phenomenon is a more or less successful defence-mechanism against a revolting reality. Eventually the mechanism breaks down, the patient as it were recognizes his condition, make-belief is abandoned, and the mental tone becomes one more befitting the actual situation.

The mechanism involved in this "flight from reality" may, of course, be much more complete, and in cases of hysterical dissociation and other hallucinatory states the patient may create a world of phantasies in which he realizes to a greater or less degree the aspirations and desires which he is unable to gratify in his ordinary *milieu*. In such cases, of course, the process has transcended the limits of the normal, and the "flight from reality" has been achieved only at the expense of sanity. The semi-delusive character of *spes phthisica* reveals, however, the one-ness of the underlying mechanisms, though the invasion of the personality is here comparatively slight, and, as indicated earlier on, usually ceases before the termination of the disease.

One may recall in this connection a case I had recently under my observation at the neurological clinic. The patient in question, in addition to the pulmonary tuberculosis from which he suffered, exhibited nervous symptoms which had arrested the attention of the examining neurologist, who had therefore referred him to the clinic. I was at once impressed by his attitude, which might be described as one of buoyant euphoria. His manner was breezy, his step elastic, and his expression vivacious. Although it was cold winter weather he came without overcoat, and even disdained a waistcoat. He made light of his symptoms, emphasized the virtues of fresh air and exercise, and explained that it was his habit to set off in the morning, walking many miles, taking only a light luncheon and not returning until nightfall. He preferred to be "on his own," and explained his dislike for companionship on the grounds that he did not like the conversation of other men. They talked "such rubbish," and made a chap feel "fed up." The fact was that he could not bear to be reminded of his condition, and association with other men entailed inquiries as to his health, on which point he was morbidly sensitive. He liked to be out in the open, hated closed rooms, shut windows, and did not wear a coat because it "gave him a tight feeling across the chest." His whole behaviour, though plausibly intelligible on hygienic grounds, was, rightly apprehended, a protest against his physical limitations and the disease which they implied. Such facts.

and elements in his surroundings as buttressed his belief in his wholeness and health were welcomed and assimilated, such as opposed it were as strongly repudiated. At all costs must he preserve this fiction of well-being, menaced as it were on every hand by staring signs and ominous portents. His conduct exemplified, in short, in an extraordinarily vivid way the "flight from reality" to which I have already referred.

Minor manifestations of what one might term the semi- or pre-delusional state are now rather distressingly common. There was a saying at one time current in asylum circles to the effect that suspiciousness was the first stage to insanity. Like most loose statements of the kind, emanating one knows not whence, it contains a certain modicum of truth. The remark might, however, have been made with equal propriety about various other mental twists and peculiarities. It is true of the mental organization that it reaches out to and apprehends just those elements and facts in the environment which appeal to and sustain the prevailing interests of the individual. Though theoretically there is no limit to the multiplication and extension of interests, actually and in practice as we say a life-long application to certain pursuits involves a certain curtailment in directions which are not immediately related to the main objective. The restriction of outlook which ensues may, in so far as it is conditioned by time and opportunity, be regarded as quantitative. In so far as it results in a definite mental approach, a more or less circumscribed way of looking at things, the limitation of outlook may be regarded as qualitative in kind. Given a certain order of facts, for instance, the artist, the eugenicist, the sociologist, the pathologist and the psychologist each construes them in accordance with his own particular mental trend—sees, as it were, the facet which is presented to him. It were idle to distinguish as between the validity of the different view-points; each is true for the individual. Here, as in other matters, the principle of relativity would appear to apply, and in so far as there is an absolute and final meaning in the facts surveyed, it would be attained rather by a composite picture of the differing, though not conflicting presentations. To say so much is, it is feared, to labour the obvious.

Granted a certain distortion of mental vision in each of us, and where it is assumed that emotional considerations have a subordinate and minimal value, the principle would seem to apply with much greater force in the case of individuals whose attitude is already oriented by strong prevailing moods. There is a type of individual, for instance, who attaches a personal and subjective significance to the most trivial happenings and facts of his existence. So much does he project his own personality into the daily events of his life that he

rarely sees them as objective realities, but only as tinged, and obscured by his own peculiar mental vision. Labouring under a sense of inferiority perhaps, he imagines that others are equally conscious of it, and interprets the most indifferent incidents in the light of this preconceived idea. Easily rebuffed, he sees a slight where none is intended, and refrains from making advances for fear of being discouraged. He imputes unworthy motives, and, tangled in the web of his dreary imaginings, sees no virtue in anything. I have encountered not a few such individuals as a product of the late war. From the outset they have taken everything amiss. The fact is that they ought not to have been soldiers, and one infers that if the medical officer had known his job they would never have been enlisted. All their subsequent experiences were regarded as personal indignities and affronts. They seem to have been pursued throughout with a peculiar malevolence, and such experiences as were the usual lot of their comrades they took in no wise sportingly. They spoke with bitter and withering contempt of everything which was done for their comfort and welfare, and hospitals, nurses and doctors all shared impartially in the general indictment. One dimly suspects that their unfortunate mental attitude had been determined long before the war, which only served, as it were, to fixate and consolidate it.

Such distortion of judgment as is here implied, though not technically regarded as insanity, comes perilously near it. Here again the underlying thread of continuity which connects morbid mental attitudes with the grosser perversions of the personality is made apparent. The true paranoiac differs from the type of individual under consideration, in that he not only distorts true incidents and facts from their real meaning, but creates in addition a fabric of imaginary events which are demonstrably untrue. The systematization which directs the ideation in either case is sufficiently apparent, but in the paranoiac the process is carried a stage further, and no longer is it a question merely of faulty interpretation, but of actual delusion.

Nowhere, perhaps is the intervention of the psychogenic factor more evident than in the case of the group of affections comprised under the term "epilepsy" and "hystero-epilepsy." Until comparatively recently a clear line of division existed between so-called "idiopathic epilepsy" and the hysterical affections which simulate it. Even as it is, the distinction between typical cases of either condition still obtains, but on the whole, the differentiation between functional and organic cases seems by no means so clear cut and well defined as was formerly the case. There would appear, indeed, to be an intermediate type of affection partaking a little in the characteristics of both. This type of case seems to be peculiarly the product

of the war, and as it may involve a recasting of current views on the subject of convulsive disorders it merits a brief consideration. One encounters cases, for instance, in which the attacks started abruptly, are severe and recurrent, and have been repeatedly certified by competent observers as true epilepsy. Yet investigation yields neither individual nor family history of epilepsy or allied neuroses, and though the attacks may be frequent and severe, there is no sign of mental degeneration, and most notable of all, they tend spontaneously to disappear. Indeed, excluding the cases of classical epilepsy in which there is almost invariably an antecedent history of fits associated with mental hebetude and confusion, if not actual dementia, as well as physical stigmata, it appears to be generally true of the fits which occur as a result of the war that they tend to diminish in severity and ultimately to cease.

May one conclude that there exist affections clinically indistinguishable or difficult to distinguish from idiopathic epilepsy, which are psychogenic in origin and which are amenable to psychic influences, in that, given a suitable *milieu*, they tend to spontaneous recovery.

In the study of mental mechanisms just outlined I have endeavoured, however inadequately, to establish a logical relationship between the minor departures from mental health, and their culminating manifestations in an actual psychosis. The fact that happily in many cases the process is arrested at this early or prodromal stage in no way contravenes, of course, my general thesis. Finally it is frankly admitted that such analysis as has been here employed is neither profound nor exhaustive, but as my main aim has been to demonstrate a prospective rather than a retrospective continuity in the ideational processes involved, it has seemed sufficient for the purpose.

Pressure Changes in the Cerebrospinal Fluid.⁽¹⁾ By D. O. RIDDEL and R. M. STEWART, M.D.Edin.

DURING the course of the last few years the study of the cerebrospinal fluid in both mental and nervous disorders has made rapid progress, and with the introduction of methods of precision much useful knowledge in regard to its physical, chemical, and serological properties has been acquired. Nevertheless, much remains to be learnt, and we propose to submit observations on one aspect of the subject which is still in its infancy, namely, the pressure of the cerebrospinal fluid, and the modifications which it may undergo in the insane.

⁽¹⁾ A paper read at a meeting of the Midland and Northern Division held at Stafford in October, 1923.

At the outset, however, it will be convenient to refer in as few words as possible to the distribution and circulation of this fluid.

The cerebrospinal fluid is contained in the ventricles of the brain, and also fills the subarachnoid spaces. Its total volume averages about 150 c.c., and this amount is sufficient to form an efficient fluid cushion for the central nervous system. At the base of the brain the space between the arachnoid membrane and pia mater is widened to form the various cisterns, and in the spinal subarachnoid space there is also a relatively large collection of fluid. On the other hand, upon the surface of the cerebral hemispheres the subarachnoid space is very restricted, and here the confined fluid is present only as a capillary layer. Although there is no single conclusive piece of evidence, the data derived from histological, pharmacological and pathological investigation point strongly to the choroid plexuses as the chief source of the cerebrospinal fluid. Whether or not it is a true secretion or a dialysate has not yet been definitely settled. The stream of cerebrospinal fluid, starting within the ventricles, makes its way through the foramina of Monro into the third ventricle, and thence through the aqueduct of Sylvius into the fourth ventricle. From the latter situation it is said to escape through the foramen of Majendie and those of Luschka into the subarachnoid space. What happens to the fluid after it reaches the cisterna magna is somewhat doubtful, but it is generally assumed to pass upwards over the cerebral hemispheres and downwards into the spinal subarachnoid space. Placed in relation to the former situation are its chief avenues of escape, for it has been recently shown by Weed that the Pacchionian bodies which are so often seen in the brains of the insane are really pathological transformations of numerous microscopic arachnoid villi, whose function it is to filter the cerebrospinal fluid in its passage through them into the large intracranial venous sinuses. In the spinal subarachnoid system the amount of absorption must be very small, for in this locality, since there are neither dural sinuses nor arachnoid villi, the lymph channels in relation to the spinal nerve roots provide the only possible outlet for the fluid. It is also necessary to state that certain authorities hold that the cerebrospinal fluid bears a much more intimate relation to the nervous system than that which we have outlined above. It is believed by many that the fluid extends along the whole length of the adventitial sheaths of the cerebral vessels to reach finally the spaces surrounding the nerve-cells, and Monakow goes even further; for he believes that the brain is nourished by a direct passage of fluid through the walls of the ventricles into the brain substance itself. It will be obvious that if this intimate relationship of cerebrospinal fluid to brain tissue exists, abnormalities of cerebrospinal fluid pressure are bound to affect the

functions of the brain, and may perhaps be responsible for "pressure" headaches, and even mental derangement. Before, however, considering the experimental data bearing on this point, certain clinical considerations demand attention.

Access to the cerebrospinal fluid may be gained either by making a puncture somewhere in the region of the lumbar subarachnoid space, or by introducing a needle into the cisterna magna at the base of the skull. The pressure of the fluid may then be measured in two ways: roughly, by noting the manner in which the fluid escapes—whether drop by drop, or in a stream—or more accurately, by attaching a manometer to the lumbar puncture needle before it is introduced. The former method is one which cannot be recommended, since so many fallacies are introduced, and we state unhesitatingly that the manometric method is the only one on which reliance can be placed. Whichever method be employed, it is of the first importance to record the exact posture of the patient when the operation is performed, for with the subject lying horizontal in the flexed position, the normal pressure will invariably be found to be less than when puncture is made with the patient in the usual sitting attitude. Furthermore, apart altogether from the general attitude and position of the patient's limbs, the pressure is influenced to a considerable degree by the attitude of the head—that is to say, by the degree of flexion or extension of the cervical spine. As Zylberlast Zand (1) has shown, flexion of the head on the thorax with the patient in the lying-down position always increases the pressure, whereas in the seated position flexion of the head provokes a lowering of pressure. The explanation of this phenomenon must be sought in the factors regulating cerebrospinal fluid pressure, which are probably three in number: (1) The elasticity of the meninges which resist dilatation by the fluid; (2) blood-pressure in the meningeal and cerebral vessels. (3) The hydrostatic factor, *i.e.*, the pressure exercised by a column of liquid on any given point. The last factor is purely physical, while the first two are biological. For the purpose of expressing in concrete terms the part played by each of these three factors, Pfaundler (2) measured the cerebrospinal fluid pressure when puncture was made—(a) with the patient seated, that is to say, when all three factors were in action; (b) in the recumbent position, when the hydrostatic factor is excluded; and (c) in the cadaver, when the elasticity of the meninges is the sole factor. His figures show that the hydrostatic factor constitutes 24 *per cent.* of the total pressure; the blood-pressure factor 68 *per cent.*, and the elasticity of the meninges 8 *per cent.* When the patient is in the recumbent posture we are dealing only with elasticity and blood-pressure, and as the former plays a minimal rôle, the blood-pressure in the vessels of the

nervous system must have most to do with maintaining the cerebrospinal fluid tension. In this attitude the normal pressure lies in the neighbourhood of 100 to 150 mm. of water, but where meningeal disease exists the pressure may be 200 mm. or more, and these readings may be increased to 400 or over by raising the patient to a sitting posture. Hence the importance of recording the attitude of the patient as well as the actual reading obtained with the manometer. With regard to the curious differences in pressure obtained by altering the position of the patient when the head is flexed, the explanation is to be found in the factors mentioned above, for when the patient is lying down with the neck flexed, the cervical vessels are compressed so that a venous stasis is created within the cranium, and hence the pressure rises. When the patient is seated the whole vertebral column is flexed, and in this attitude not only is pressure on the veins of the neck avoided, but the elevated position of the head itself favours venous return, and hence the pressure of the cerebrospinal fluid is actually lowered.

Lastly, it is important to recognize that a factitious increase of intrathecal pressure may be obtained if readings are taken immediately after lumbar puncture has been performed, and judging by reports in the literature, this mistake is constantly being made. Since any alteration in the intracranial venous pressure effects changes in the cerebrospinal fluid in the same direction, in violent or excited patients the readings are always high, for vigorous movements of the body together with forced respiration raise the intracranial blood-pressure, and inevitably that of the spinal fluid as well. Even if the patient remains quiet during the performance of the operation, the pain evoked by piercing the skin is sufficient in itself, save in the comatose state, to cause an immediate rise of pressure. We have never failed to obtain this effect in several of our observations. Thus in one case the cerebrospinal fluid pressure after puncture rose to 520 mm. water, and almost immediately afterwards fell to 155 mm. In another instance the initial reading of 290 was followed after three minutes by a fall to 170 mm., at which level the pressure thereafter remained constant.

Bearing these pitfalls in mind, we may briefly summarize our observations on patients suffering from mental disease as follows :

In healthy imbeciles the cerebrospinal fluid pressure lies within normal limits—that is, from 100–150 mm. H_2O . In katatonic dementia præcox the pressure lies between 170 and 180 mm. In idiocy with gross brain disease the pressure is considerably above normal—up to 250 mm. In all cases of early and well-developed general paralysis hypertension is invariably found ; usually the pressure is in the neighbourhood of 300 mm., while in advanced bedridden

cases the pressure is either normal or below normal. In cerebrospinal syphilis, in epilepsy and in insanity with gross brain disease a reading considerably above normal is almost always recorded. In the depressed phase of manic-depressive insanity no uniform results are obtained, but on the whole the pressure tends to be raised. We have no observation on cases of mania. All our observations were made with the patients lying down. In these cases presenting evidence of hypertension a very marked improvement could often be noted after the withdrawal of 10 or 15 c.c. of fluid, and this beneficial result was particularly striking in cases of general paralysis.

With regard to general paralysis the good effects obtained may, of course, be ascribed not only to the reduction of pressure, but to the removal of accumulated toxins in the cerebrospinal fluid. Cerebrospinal fluid drainage appears to be practised much more extensively in America than in this country, and there seems to be no question that general paralytics treated in this way become much more tractable, are less liable to seizures than the untreated case, and not infrequently improve to a remarkable extent.

This now brings us to the final section of our paper, namely, observations on spinal drainage without lumbar puncture, and for a proper grasp of this procedure it is essential to present a brief summary of the work of certain American physiologists. In the course of some experiments on cats undertaken to determine whether an increased amount of salt could be detected in the cerebrospinal fluid after intravenous injection of hypertonic solutions of sodium chloride, Weed and McKibben (3) observed that within a short time after intravenous injection cerebrospinal fluid could not be obtained when the subarachnoid space was entered. Further experiments in which a manometer was attached to the lumbar puncture needle showed that in the cat hypertonic salt solutions when given intravenously cause a marked fall, often below zero, in the cerebrospinal fluid pressure. The physiological explanation of this phenomenon appears to be concerned with changes in the osmotic value of the blood. Fluid is drawn rapidly into the bloodstream from all available sources, and this process continues until the osmotic pressure in the fluid cavities is reduced below that within the vessels. Thereafter the normal equilibrium is established by the replacement of these fluids from the blood. In the case of cerebrospinal fluid absorption is both rapid and vigorous, and reaches its height in from two to three hours after administration of the hypertonic solution.

Moreover, the marked changes of the cerebrospinal fluid have a definite relation to the resultant volume of the brain, intravenous injection of strong hypertonic solutions being associated with definite

shrinkage, and the injection of hypotonic solutions with appreciable increase of the brain bulk. At a later date these results were confirmed by Foley and Putnam (4), who showed that it was also possible to effect similar changes by introducing the hypertonic solution into the gastro-intestinal tract. The clinical application of these experiments to man was first demonstrated by Haden (5), who obtained symptomatic improvement in cases of cerebrospinal meningitis by the intravenous injection of 40 *per cent.* glucose solution. Following this, Foley and Cushing (6), Sachs, and again Foley (7) recorded their experiences in cases exhibiting high grades of intracranial pressure, the results being on the whole satisfactory, especially in those cases associated with cerebrospinal fluid obstruction.

It is, of course, no new discovery that the withdrawal of cerebrospinal fluid has a definite field of clinical application, for simple drainage by lumbar puncture has for some years been employed in America as an adjunct to the salvarsan treatment of neuro-syphilis. Dercum (8), who is an enthusiastic advocate of spinal drainage, goes so far as to attribute the rather limited success of the Swift Ellis treatment entirely to the withdrawal of cerebrospinal fluid, which is an integral part of this procedure. Other writers, notably Gilpin and Early (9), believe that the penetration of arsenic can be increased by combining intraspinal injections with spinal drainage, a claim which has not been entirely borne out by subsequent work, for Mehrtens and McArthur (10) obtained no larger percentage of arsenic penetration when intravenous injections of salvarsan were followed by complete spinal drainage. In any case the amount of arsenic available for distribution in the diseased brain-tissue must be extraordinarily small, and further, it is by no means settled that arsenic penetrates the brain-tissues.

These considerations, however, have not deterred the advocates of intraspinal therapy, and the new method which we have outlined above has been enthusiastically adopted for increasing the amount of arsenic which may possibly be carried into the spinal fluid.

In the plan of treatment adopted by Corbus, O'Connor, Lincoln and Gardner (11), 100 c.c. of 15 *per cent.* hypertonic saline warmed to body temperature is given intravenously by the gravity method. At the end of six hours 0.9 grm. of neoarsphenamine is injected by the same route. This period of six hours between the two injections is chosen on the assumption that when the increased restorative formation was taking place a larger quantity than normal of arsenic would be carried into the subarachnoid space: 28 cases were subjected to this treatment, and on all but two arsenic was subsequently found in the spinal fluid. With regard to the therapeutic results, the authors content themselves with saying—"Some of the

patients obtained their first negative serologic findings following this form of therapy." With five exceptions their cases were all examples of cerebrospinal syphilis which had been subjected to previous treatment, and it is therefore a little unfortunate that no comparison was made between the clinical results of the two forms of treatment.

In this connection the paper by Ebaugh (12) is much more satis-

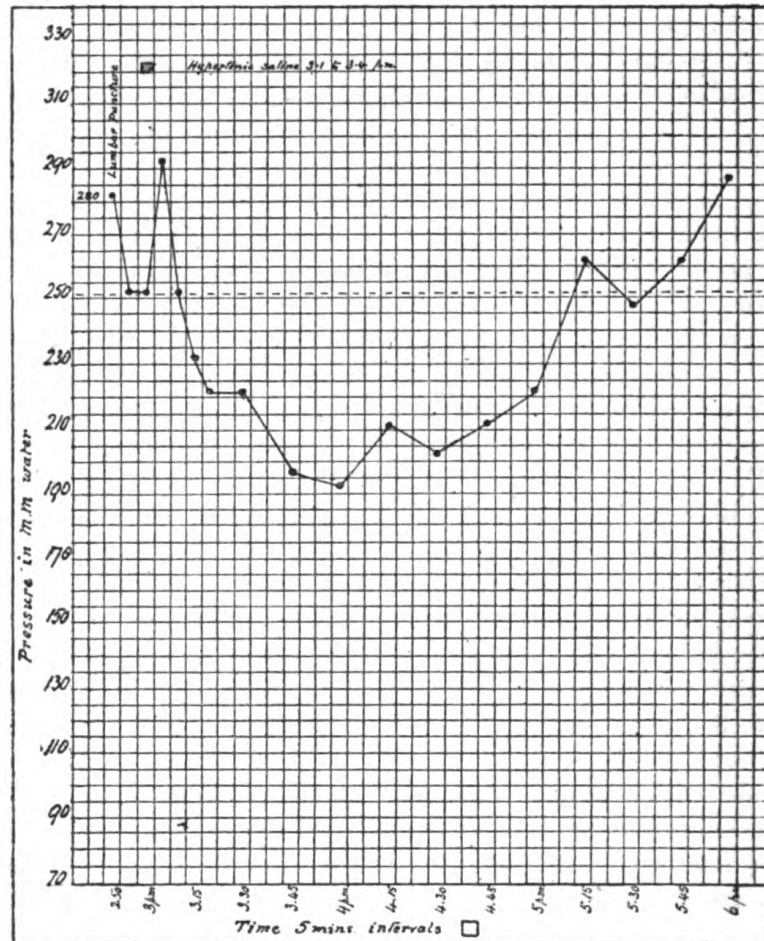


FIG. 1.—W. E.—. General paralysis; early case.

fying. He states definitely that "no noteworthy changes were noted in the mental states of any patients with the exception of one case."

Our results with the ordinary methods of treatment for general paralysis have been distinguished for the most part by an entire lack of success, and we therefore decided to combine the Swift-Ellis treatment with intravenous administration of hypertonic salt solution. As a preliminary we considered it advisable to check the results of the various entries referred to above by observing the changes in

cerebrospinal fluid pressure and the clinical progress, if any, effected by hypertonic solutions alone, and we believe our results are of sufficient interest to merit their description here.

In the plan of treatment adopted we started by performing lumbar puncture, care being taken to prevent the escape of any fluid. Before the puncture was made Eve's water manometer was attached

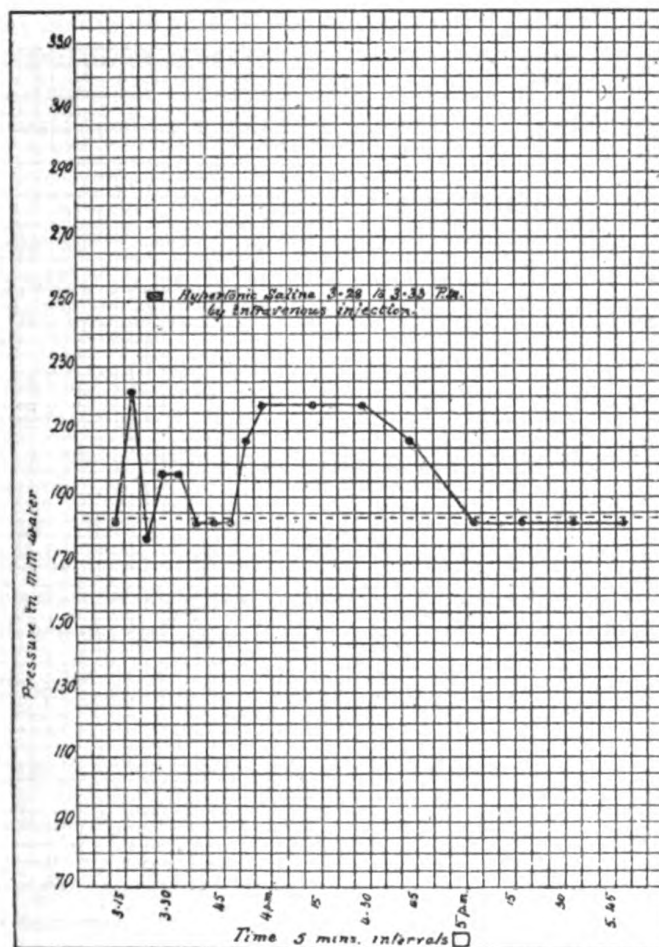


FIG. 2.—J. G.— General paralysis; advanced case.

to the needle, and readings of the intrathecal pressure were taken every two to five minutes, until it remained more or less constant. We then gave by the gravity method an intravenous injection of 50 c.c. of 30 per cent. sterile salt solution. Immediately following the injection the patient experienced a feeling of warmth, which slowly passed down the back until it reached the lumbar region. This sensation was in most cases followed by a short rigor, after which the patient recovered his equanimity. The charts which we present

illustrate in detail the results of three observations on patients suffering from general paralysis. In Fig. 1 it will be seen that the spinal fluid pressure of an early example of general paralysis was reduced from 250 mm. to 190 mm. H_2O , and that the initial pressure was not restored until a period of nearly three hours had elapsed. Figs. 2 and 3 illustrate the results obtained in two advanced cases. In one of these the pressure underwent no diminution after the

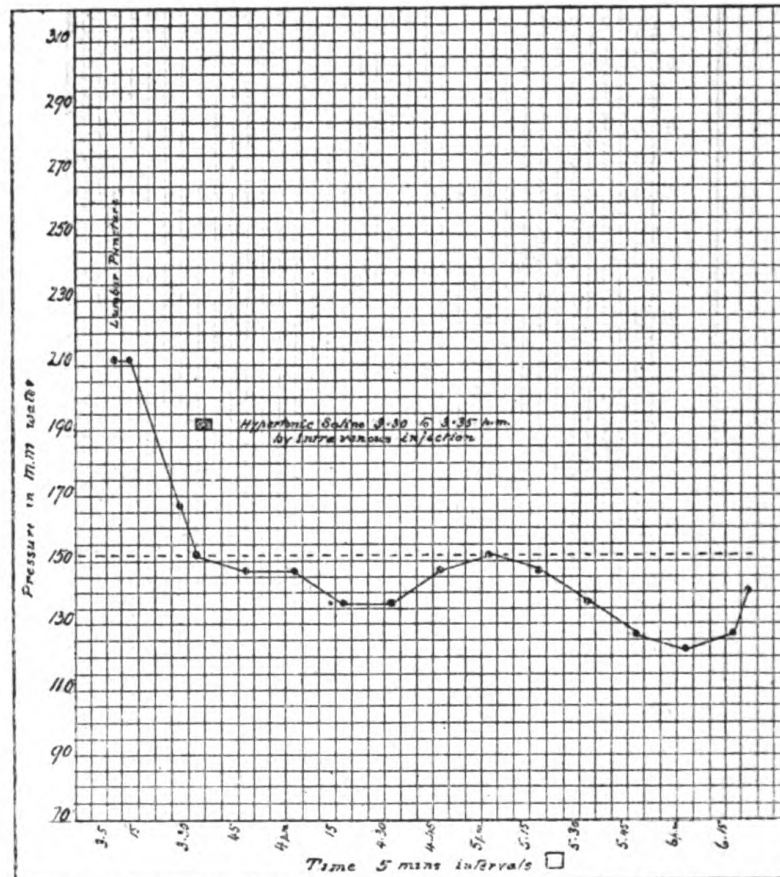


FIG. 3.—W. D.—. General paralysis; advanced case.

administration of hypertonic saline, and in the other the fall was of a slight and transitory character.

Summary.—In the human subject the intravenous injection of 30 per cent. saline solution may condition a transient rise of cerebrospinal fluid pressure, quickly followed by a fall of pressure which persists for a considerable period. In patients suffering from early general paralysis similar results may also be obtained, but when the disease is fully established, hypertonic saline causes either a slight fall of pressure, persisting for a short period, or no appreciable altera-

tion. In advanced cases of general paralysis attempts to increase the penetration of arsenic by this method of treatment seem foredoomed to failure, probably because the inflammatory reaction in the cortex and membranes of the brain impedes to a great extent the rapid absorption of cerebrospinal fluid.

In conclusion we would like to remark that the work of Weed would appear to place on a still firmer scientific basis the time-honoured custom of giving the insane patient a weekly dose of salts, since it now emerges that not only is his loaded colon relieved, but the condition of increased cerebrospinal fluid pressure as well, which we have shown to be not infrequently present.

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Twenty-eight Years' Lunacy Experience in Egypt (1895–1923).

By JOHN WARNOCK, C.M.G., M.D., B.Sc.Edin., Late Director of the Lunacy Division, Ministry of Interior, Egypt, and Director of Abbâsiya Hospital for the Insane, Cairo.

PART I.

PRELIMINARY.

HAVING been honoured by requests to describe my experiences in Lunacy in Egypt, and my services in Egypt having recently come to a close, I desire on the present occasion to offer to my fellow-workers in England a *résumé* of the changes in Egyptian Lunacy administration for which I have been responsible during the past 28½ years.

Detailed accounts of these changes have been printed annually in the Egyptian Lunacy Reports. I shall feel honoured if the Association will accept a copy of the Reports for its Library.

One object in recording so fully the details of this experiment in Lunacy Reform is that its perusal may be of use to others. The details of the application of British Lunacy methods to a partially civilized race in a hot climate, worked out in Egypt, may prove helpful in other similar countries. Full details and plans were furnished to the French Government many years ago for use in N. Africa. Plans and details have also been sent to various Indian and Far Eastern countries.

Previous history.—I may point out that the description and treatment of insanity by the Arabs date back to the ninth century. The curious are referred to the article on Najab ed Deen Mohamad in Tuke's *Psychological Dictionary*.

The history of lunacy in Egypt up to the year 1889 was given by the late Dr. F. M. Sandwith, whose services to the insane in Egypt are gratefully remembered, in the *Journal of Mental Science* of January, 1889 (vol. xxxiv), and by Drs. Urquhart and Tuke in that of April, 1879. Therefore I shall not repeat their information.

The necessity of reforming the Egyptian Asylum at Abbâsiya, near Cairo, had been acknowledged for several years; and improvements had already been made in structure and diet, and by the appointment of a qualified Egyptian doctor. Dr. Sandwith, Dr. Greene, Dr. Herbert Milton, Dr. Theo. D. Acland, Sir J. Rogers and others had all helped to improve the condition of the insane, or to call attention to the need of providing a properly organized hospital, and their labours should not be forgotten. But financial stringency prevented further progress until 1894, when sufficient funds were granted to pay the salary of a British medical officer; and the post was offered to me after I had had eight and a half years' experience in English lunacy work, and had visited several British and foreign mental hospitals.

Appointment in 1895.—In spite of many misgivings at the difficulties of the task, the opportunity of getting away from the damp and cold of England, and the chance of a more adventurous career in the "gilded" East, decided the day. The pay offered, with some unfurnished rooms in a corner of the Asylum buildings, being insufficient to cover current expenses, furniture, rations and servants were demanded and granted in addition. The contract, at first for two years, was subsequently extended to service to the age of sixty years, according to the Pension Law of Egypt. The possibility of some further income from private practice was also held out.

At that period, and for many years afterwards, the Cairo Asylum

was included in the Public Health Department; and it was owing to the energetic representations of the Chief of that Department, the late Sir John Rogers, that my post was created.

In February, 1895, I arrived in Cairo and took up residence in some barrack-like rooms in the S.E. corner of the Asylum buildings. I recall with appreciation the kindly assistance of Sir John Rogers and his deputy, Major (now Sir Horace) Pinching, in learning the ropes and pushing through the various reforms needed. It may be confessed now, that for some months after arrival the problem appeared to be hopeless, and thoughts of resignation from an apparently impossible task were seldom absent. Besides the almost complete lack of funds, my total ignorance of Arabic, and the total ignorance of patients and staff of any language but Arabic, prevented my doing anything for some time. I was unable even to tell the servant to shut the door or to ask a patient his name. I had no interpreter.

However, after some time I found a patient who could write English, and for a while he was employed in translating Arabic letters, etc., until it was discovered that he interpolated numerous mis-statements founded on his delusions. In those days an English or French-speaking clerk was not available. For a time I could only look on, and guess at what was going on in most matters. The frequent deaths, certified as due to "debility," seemed the most serious blot; and linguistic acquirements not being required for *post-mortems*, I instituted them by signs, in the open air, there being no mortuary provided. The frequent discovery of serious injuries pointed to the first changes necessary. However, it was clear that a working knowledge of colloquial Arabic was the prime necessity of the situation, and had to be acquired as rapidly as possible. Literary Arabic, being only acquirable by long and tedious toil, was out of the question, with so much other work pressing. Egypt being linguistically a modern tower of Babel, it was impossible to learn all the tongues necessary to converse with all the patients and their friends. However, a previous knowledge of French and Italian proved useful, and in a few months I could also make my wants known in Arabic and give orders.

THE CONDITION OF ABBÁSIYA ASYLUM IN 1895.

This is described at some length in my report for that year. The Asylum consisted of an abandoned palace on the open desert, outside the town of Cairo, with no means of access except an unlit road across the desert. The unfenced railway line to the quarries passed the main entrance at a distance of 10 yards, and was a continual source of anxiety, several persons being killed on it before it was

removed some years later. A one-storeyed annexe of the palace, originally stables, etc., was occupied by the female patients, 136 in number, in 2 large rooms facing a small bare sandy court, with an opening in the boundary wall leading to the adjacent military hospital. I may mention that as this opening was used as a means of entrance by the soldiers to the Hareem, I soon had it built up. The main palace building, occupied by 304 male patients, was of two storeys and occupied three sides of a square, but had only one staircase. All windows had iron grills, but no casements of glass or wood. The floors were of soft stone everywhere, into which the water soaked. There were woven-wire bedsteads in some rooms. Vermin in the shape of bugs, pervaded every bedstead and room, and even my office—thousands, if not millions of them; lice were ubiquitous; mosquitoes bred in the numerous cesspools also added to our troubles; scorpions were not rare; a plague of flies also harassed us, and myriads of sparrows flew about the rooms, chirping noisily. There was one airy bath-room, used alternately by each sex, a kitchen and a store-room. Very few latrines existed, and in consequence insanitary nuisances were found in all sorts of places, not excluding the kitchen. There were no general pass-locks, and the whole building formed two wards, so that patients could wander right round one half of the institution. Scores of patients were tied up in long-sleeved camisoles, which the attendants put into use as they pleased. *Post-mortems* often showed dislocation of the clavicle on to the sternum due to the over-forcible use of these camisoles. The artificial lighting was done by hanging kerosene lamps, easily reached by the patients, and fires from this cause occurred on several occasions. Two small cells padded with leather existed in the Hareem, but so obviously dangerous in design that they could not be used; in hot weather, indeed, the use of such a padded room would be torture. Long boards with an aperture for the head (?) and padded for the neck were shown to me as a means of restraint, but I never saw one in use; the methods of restraint were far milder than those I saw in use in Venetian Asylums in the year 1902; nor were the wards placarded with labels indicating the character of their inmates—"Pericolosi," etc.—as at Venice. There was at Abbâsiya no separate night staff, one-third of the attendants staying for night duty in turn. A male attendant took charge of the Hareem at night.

The chief doctor lived in Cairo, three miles away, and visited the Asylum every morning, and his deputy slept at the Asylum. There were no case-books, but a bed-letter existed for each patient, with his name (if known), diet and treatment, and note of his malady in Arabic. There was a register of patients' names—in Arabic, of course. A favourite form of treatment was blistering, and septic sores resulting

therefrom were frequent. Large quantities of sulphonal were used, and staggering gait from its effects was to be noticed. The patients remained in the bedrooms day and night, the central garden of the Asylum and the Hareem court being merely for traffic. The occupation of patients was hardly attempted; at night the uproar and disorder were indescribable, and it was difficult to walk round in safety, especially in the Hareem, where I was frequently attacked. All attempts at medical examination by stethoscope, etc., were rendered useless by the uproar. The diet was fairly good, and extras were given to feeble cases. Deaths were frequent, and were at the rate of $33\frac{1}{2}$ *per cent.* per annum on the average number resident.

The household drainage emptied itself into large cesspools, while the latrine tubs, smelling abominably, were carried through the dining-rooms, and removed on a cart to the adjoining sewage depot. The latter served for the whole of Cairo, and being only half a mile from the Asylum, caused a fearful nuisance by its overpowering "massive" smell of decomposing sewage, a smell that at times made me escape to Cairo in order to breathe freely. The whole area of the Asylum and its gardens amounted to two and a half acres. It was, and is, situated in the military area between a hill (the Red Mountain) and the British barracks, so that to reach Abbâsiya one has to pass through the barracks—a very cramped position, and one that has caused great friction and inconvenience. No means of artificial feeding existed, though many patients refused food. General paralysis was said not to occur. Numbers of cases were pointed out as being hashasheen, and sulphonal appeared to be their specific.

The absence of surnames made indexing difficult. In the Hareem disorder was more marked, *e.g.*, two or three patients occupied one bed; many female patients had no names, and one of my first duties was to assign them names—"Jasmine," "Rose," etc.—which they still bear. The female attendants were a slovenly, noisy set, several being pregnant, while others carried babies about with them. They were, however, very agile, and ran across the rooms and leaped over beds in pursuit of refractory patients like sportswomen. Most of the attendants, male and female, appeared to be cheerful, easy-going people, who took insanity as a matter of course, and indeed were too familiar with it to take any precautions. There seemed to be little intentional cruelty, but much neglect and carelessness, and a complete absence of any of those rules which prevent accidents in asylums. If an accident occurred, it was nobody's fault. At noon most of the male attendants deserted the patients and met in the garden to pray. Attendants wore what looked like long white shirts, the ends of which they held in their teeth when running. Like most Egyptians they had loud voices, and kept the patients disturbed with their shouted

conversations; scarcely one male attendant, and no female attendant, could read or write.

I was furnished with the following statistics for the preceding year (1894): 290 patients existed on January 1, 1894; 724 were admitted during 1894; 122 died, mostly from enteritis; 451 were discharged; leaving 441 in residence on December 31, 1894. 360 of the 1,014 cases treated were ascribed to hasheesh, 50 to alcohol, and 38 to religious excesses. 12 of the patients were foreigners. 517 were said to have come from Cairo.

No medical certification before admission seems to have been necessary, a letter from the police being the only formality.

There appeared to be no modern classification of the patients, no infirmaries, and no attempt to adapt the buildings to the special needs of the insane; the absence of single rooms rendered mechanical restraint necessary, as some patients were very violent, and had already killed others. I was told by several persons of a former patient, called "The Butcher," who had killed twelve patients in one night, and who was killed by the attendants the next day—I suppose in self-defence; also of treatment by tying the patient's head under a water-tap all night. But this, though probably true, was not observed by me. The dreary walls, in many cases without even windows, and the absence of day-rooms gave a prison-like effect. Furniture scarcely existed.

In some rooms policemen mounted guard over criminal lunatics.

There was much eye disease, in fact a large percentage of the patients were so affected. Advanced foul-smelling favus was noticed all over the Asylum, the whole scalp of the patient being a mass of yellow scabs; no treatment or segregation of these cases was attempted, and evidently the disease spread freely. It took years to eradicate it. Numerous bald heads still show the former ravages of the disease. Tuberculosis of the bones was common among the negro patients.

SKETCH OF ANNUAL CHANGES DURING 28 YEARS.

It was easy to see what changes were required to modernize the Asylum, but unfortunately nearly every change required an outlay of money, and in those days the Egyptian Government had little money to spend on the insane. However, L.E. 1,000 was granted for the year 1895, and defrayed the cost of enclosing a few acres of land beyond the Hareem, and erecting 15 single rooms of 31 cubic metres (1,064 cubic feet) each, with a verandah; so that by the end of 1895 the most violent women were separated from the rest, and mechanical restraint was abolished in the Hareem. This and all other buildings were sketched to scale by me, and plans were made

by the Engineer of the Department of Public Health, who also placed a foreman at my disposal. Masons were easily found at very low pay; the quieter patients helped as labourers, and thus the work was put through. I may say that this system of constructing our own buildings remained in vogue until 1903, when it was superseded by contractors. It entailed a lot of extra night-work on my part, keeping account of materials, pay-sheets, etc., but the rapid completion of additional buildings was so urgent that I felt obliged to undertake it.

Before planning any additions, I pointed out the unsuitable position of the Asylum, on military land, on barren desert where water was only obtainable at great cost, and that the existing buildings could never be completely adapted to the needs of a modern hospital for the insane, and I proposed the construction of a completely new hospital on a better site. The lack of funds prevented even the consideration of this proposal.

Besides the construction of the fifteen single rooms above mentioned, old buildings were repaired in 1895 and arranged to take 100 beds. Infirmarys were instituted. The general bath-room was divided up for the two sexes. The patients were classified and redistributed, after personally tabulating the superficial area of the wards and calculating the beds per room. Open-air exercise daily was given in the two existing gardens. 215 patients were induced to follow simple occupations.

Modern case-books, registers, *post-mortem* records, admission-tickets, surgery book, weekly medical journal, work sheets, daily medical reports, ward books, etc., were printed in Arabic and English, and put into use on July 1, 1895. Autopsies were made in all deaths, which fell from 122 to 77 per annum; 18 *per cent.* were due to tuberculosis, and 6 *per cent.* to general paralysis. All the clothing was disinfected, and vermin exterminated by disinfecting all walls, ceilings and beds—a long and troublesome procedure as many of the ceilings were of wooden beams. Wood's and Dent's control clocks were introduced for night use. Blistering ceased, and the use of hypnotics was carefully controlled. The staff was reorganized by importing fifteen men from the Egyptian Army Hospital, and two Egyptian doctors were appointed to assist me. As they spoke English, my work was rendered easier. Like myself, they had to work long hours and had few holidays. A separate night staff was appointed.

Mechanical restraint had still to be used occasionally on the male side to the extent of fourteen hours a week in December, 1895. All seclusions and mechanical restraint were now registered as in England.

Proper medical certificates were demanded before the admission

of a patient, and forms were issued, being a simplified Arabic edition of the form used in England for pauper cases. The way these forms were filled in gave me an insight into the Egyptian mentality, and as legal documents they have little value; but they have been of great use nevertheless.

All sorts of structural improvements were also effected; scores of new windows were put in, many skylights were glazed. Drainage was extended.

Seats, tables, bedsteads, washing machines, clocks, food utensils, slippers, etc., were provided.

Water-pipes were carried to all parts of the Hospital and taps and drains provided. A well was bored, but the water was brackish.

The dangerous padded rooms were pulled down. Quarters for paying patients were arranged and furnished. New store-rooms were fitted up. Strong clothing was provided and proper uniforms for attendants. Many floors were tiled; walls were bricked up; doorways opened up and a proper system of hospital locks commenced.

A study was made of hasheesh insanity and recorded in the Annual Report. Many cases formerly ascribed to hasheesh seemed to me to suffer from other forms of insanity. The ordinary symptoms of chronic dementia had been apparently formerly considered to be characteristic of hasheesh insanity. In those days, although hasheesh was prohibited, it was openly used in the cafés; and I have watched the Gozeh (a peculiar kind of pipe consuming hasheesh) circulate; in fact it was offered to me, but as the last smoker was a leper I hastily declined.

488 patients were in residence at the end of the year. 19 cases of general paralysis were noticed, contrary to the local belief that it did not exist among Egyptians. Statistics as to the nationalities of its victims and its relation to syphilis were commenced this year and kept up annually. It was soon apparent that syphilis was an almost invariable antecedent of the disease, as had been already alleged by several observers in Europe.

In 1896 a cholera epidemic caused an immense mortality throughout Egypt. Introduced into the Hospital by an attendant, it attacked thirty patients, of whom only ten died. All infected sections were evacuated and the patients placed in tents on the adjoining desert. Meanwhile I had to supervise the adjacent cholera camp, to which hundreds of cases were brought from Cairo. Further reform had to await the cessation of this scourge. All Government building in Egypt ceased, and the majority of grants for that purpose were cancelled to supply funds to fight the epidemic. For a month I was never off duty or able to leave the premises.

It is an ill wind, however, that blows no one good, and the cholera epidemic prevented new admissions for much of the year, as new cases might again have infected the Hospital; the number of admissions fell 100 short of the number admitted in 1895.

In spite of financial retrenchments, we were able to spend L.E. 3,573, as we had already signed contracts for material before the cholera epidemic declared itself, all our plans and specifications having been ready before the grant was published in January. But for several

months in the summer the epidemic was so devastating that our work had to wait. The grant covered the construction of fourteen additional single rooms in the new female acute section, also the walling in of an airing-court on the desert east of the Hospital for acute male cases, and the construction of fifteen single rooms for men. Thenceforth mechanical restraint ceased, except in the treatment of surgical lesions, and the camisoles were cut down into strong shirts for working patients.

Other additions now made were a mortuary, a work-shop, and several verandahs and latrines and drainage extensions; 100 new windows were knocked in to improve ventilation. Extensive repairs to walls, roofs, floors, kitchen, hot-water supply, baths, sinks, and protecting barriers to the staircase, also food trollies, and all sorts of furniture. The old buildings were in great part adapted to their functions of hospital wards. Hundreds of trees were planted. Hospital locks were provided for all doors in the old buildings. As these doors were thin and had narrow styles of varying dimensions, I had to measure carefully the width of the styles of every door, tabulate them into series and order locks of appropriate sizes for them all—a most tedious business. The doors were always of two leaves—an awkward type for hospital purposes.

The patients were reclassified and the area of the dormitories remeasured, and the average allowance of 76 square feet per bed was fixed; in acute sections containing single rooms as well as associated dormitories, the area was up to 92 square feet per patient; in the quieter sections the area fell to 66 square feet in some cases. The total number of beds provided was fixed at 420, and at the end of the year the Hospital was almost full; this reduction in numbers was effected by sending out 154 uncured patients to their *homes*, and not releasing them at large in Cairo, as was formerly the custom. The fall in admissions, owing to cholera, also helped us to reduce the patients to the number of beds available.

Several acres to the east of the Hospital were fenced in and added to the estate.

The mosquito plague was attacked by filling up all the cesspools and carrying the sewage away from the Hospital; but as ponds and cesspools remained in the adjoining Military Hospital we did not become quite free from mosquitoes. By structural alterations it was arranged that all latrine tubs should be removed from the exterior of the hospital, and they were no longer carried through the wards among the patients.

All windows were glazed this year. As a result of the structural alterations serious accidents became less frequent: only two fractures were sustained during the year.

The male staff was quite disorganized by the recall to the Army of the soldiers engaged in 1895 for the Dongola Expedition. In future no reserve men were engaged. A set of hospital rules in Arabic was published.

Thus in spite of the disorganization caused by the cholera epidemic, some progress was effected.

In the year 1897 a villa for male paying patients was built on the vacant land to the east of the hospital, which had been fenced in the previous year. A long-suffering class was at length placed in decent surroundings. Also an acre of ground was annexed from the Military Hospital and added to the Hareem, and the construction of a female infirmary commenced thereon, and a boundary wall. L.E. 2,000 was spent on these additions. The establishment of beds was raised to 430, and at the end of the year 417 were in residence. The want of room for the high admission-rate was already an urgent question, and the falling death-rate accentuated it. It was noted that the rapid discharge of uncured cases had resulted in twenty-two offences of violence or indecency.

The high admission-rate in the hot months was demonstrated by charting the admissions and the monthly temperatures, and at the same time the parallelism of the curve of hasheesh admissions and the temperature curve proved the fallacy of attributing so many cases to hasheesh, as had been already suspected for other reasons.

The frequency of grave injuries on those admitted was the subject of inquiry. Twelve cases of fractured ribs were admitted, and seven other cases admitted were noticed to be severely if not mortally injured. The crusade against this abuse was intensified, and in every case inquiries were made as to the causation, and prosecutions undertaken if responsibility was clear. A comparison between the injuries noted by the certifying doctor on his certificate with those noted on admission at the Hospital was carefully made in every case, and injuries incurred *en route* to the Hospital were thus identified, and the police escort made responsible.

However, the carelessness exhibited by medical certifiers in examining the physical state of the patient prevented our proving the responsibility of the police in many cases.

With the help of the late Dr. Sandwith, every patient treated in 1897 was examined for symptoms of pellagra, and forty-five cases were detected, and an analysis of their symptoms was published.

The absorption of much of my time in acting as a clerk of works was pointed out, and assistance was asked for; and the need of other European assistance was also indicated, but in vain for the present.

In the year 1898 L.E. 5,000 was spent on buildings. A male infirmary was built in the eastern grounds, and a female infirmary, also a section for male paralytics, each with an airing-court. The number of beds was thus raised from 430 to 453, and the overcrowded female dormitories were thinned out. A house for the Superintendent was built to the west of the Hospital, but too near to the Hareem. Although there was plenty of waste land further west, permission to build on it was refused on the plea that it might be wanted for War Office buildings. It still remains unused—in fact it now forms

part of the hospital estate, but unfortunately the house cannot now be shifted further off.

Separate rooms were provided for female paying cases in an annexe of the female infirmary.

The single rooms of the new infirmaries were an improvement on the 1896 pattern, and gave at least 36 cubic metres (1,254 cubic feet) to each patient—a necessary allowance in a hot country; ample through ventilation and a skylight were provided. Already the difficulty of devising a waterproof yet warm floor in these rooms was felt. The modern system of covering the floor with thick linoleum glued to concrete had not been invented, and indeed when tried in later years was found useless for destructive patients. Various other improvements were effected in structure and equipment, including the provision of warm, thick overcoats for winter use.

There being 591 admissions, the discharge-rate had to be high also. The admission of European patients without consular authority was practically put an end to by urgent representations.

In 1899 a plot of land to the N.E. of the Hospital was acquired. L.E. 2,000 was granted for buildings, and the Superintendent's former quarters in the Hospital building were adapted for the use of patients. A piece of land was detached from the Military Hospital and a new laundry built there. A bakery was also built, and bread was made there by the patients for the Hospital and for all Government hospitals in Cairo. The internal telephone system was completed. Numerous structural improvements were effected. There were now nine airing-courts with trees and seats, sixty-four single rooms, infirmaries, and separate quarters for paying patients. Water mains were laid throughout the grounds, and filtered water supplied to all sections. The kitchen was extended. The total area was now $17\frac{1}{2}$ acres.

The establishment of beds was raised to 474, but at the end of the year there was resident an excess of 55 patients in spite of discharging 198 uncured cases. The additional accommodation provided could not catch up with the high admission-rate.

In the year 1900 L.E. 2,500 were granted for buildings. The grounds to the east of the Hospital were walled in and cut up into airing-courts by wooden fences. Sun-shelters were provided, mostly from the wood from old buildings, and trees planted. The recently acquired ground to the N.E. was fenced in. An additional section for acute male cases was arranged, and ten single rooms built.

The paralytic section was extended and eight single rooms added. The drainage system was improved and extended to Abbâsiya.

Roads were made around the Hospital.

A dairy was established and a supply of eighteen buffaloes bought so that pure milk replaced the adulterated article formerly supplied.

As in previous years, numerous structural improvements went on in the old buildings. A roadway was cut through the eastern wing of the old palace buildings, so as to give easy access to the new eastern sections.

The number of beds was now 500; but the admissions having risen to 633, of which one-third were readmissions, it was found necessary to discharge over 400 uncured cases to keep our numbers down. The construction of an additional hospital was again brought forward; its type, cost and situation were discussed at length in the Annual Report.

For five months I had the assistance of an English medical officer, who, however, had had no experience.

In the year 1901, to make room, sixty-three criminal lunatics were removed to a small criminal asylum establishment at Tourah Prison, where I inspected them quarterly and signed up discharges, etc., L.E. 5,000 was granted for building operations at Abbâsiya. A roadway through the Military Hospital was walled in, so as to provide a separate access to the hospital stores. To obtain this strip of land, we had to build a latrine and a carpenter's shop in the Military Hospital in exchange. The roofs of the old palace building were remade. All the floors upstairs and downstairs were removed and replaced by mosaic and polished pitchpine. The whole Hospital was recoloured and painted externally and internally. Four additional staircases were made in the old palace building as fire-emergency escapes. A long list of structural alterations were effected to improve the kitchen, bakery, stores and sections.

The 500 beds were reclassified into sections of 35 patients each; and the adaptation and renovation of the old buildings were nearly completed. Workshops, a stable, store-rooms and latrines were added. An oil-engine and a dynamo, etc., were bought and electric light was manufactured and supplied to the whole institution.

The photography of each new admission was now commenced.

The amount of work achieved this year was large. Almost the whole of the old hospital was gutted; while it was being refloored and reroofed, the patients still resided in the sections as far as possible. It required considerable ingenuity to arrange for their accommodation, and serious risks of accidents had to be taken. Some patients actually did fall through the ceilings, but mercifully they were held by projecting laths, and were safely extricated. As the work had to be hurried through it was impossible to take annual leave, and throughout the hot weather we were all overworked, and the management of an asylum with an immense admission-rate of acute cases, and the supervision of such extensive alterations at the same time, was indeed too heavy a task for one person, and by the end of the

year I could keep on no longer without help. I had worked alone for seven years without any European assistance.

In the past seven years the first stage of the task had been pretty well completed, *i.e.*, the remodelling of the old buildings and the establishment of the elementary essentials of a modern hospital for the insane, in structure and organization ; the chief abuses had been checked, and statistics had been gathered on which future developments might be based. This had been done in spite of scarcity of funds, and indeed very cheaply, by avoiding contractors' charges, by personal supervision, and by using patients' labour as far as possible. Many thousands of pounds were saved by these means. In this first and difficult stage I have to acknowledge, with gratitude, the advice of several British lunacy authorities, including the late Sir G. Savage, Sir R. Armstrong Jones, the late Dr. Urquhart, the English Lunacy Commissioners and others, besides the unfailing help of my English chiefs, Sir John Rogers and Sir Horace Pinching, and of the late Earl of Cromer, who showed great interest in the work, never failing to inspect the Hospital in every part once a year, or to use his influence in difficult situations, until he left Egypt.

It was clear that I could no longer manage the annually increasing duties without skilled assistance ; and at last I was allowed to engage an English medical officer, who arrived in April, 1902, although, as no quarters were available at the Hospital, he had to reside at Cairo, and his services consequently were not available at night. It was indeed only four years later that a residence was provided for him at the Hospital. A European was also engaged to manage the electric light apparatus, and another to do photography and pharmacy work.

In the year 1902 cholera again attacked Egypt ; and though only one case occurred in the Hospital, it had a great effect in reducing the admission-rate, the Hospital being closed to admissions for some time for fear of infection being introduced. Thus for the second time the problem of finding room for a high admission-rate had been relieved by a cholera epidemic. This relief was, of course, temporary, and I proposed to annex the adjoining Military Hospital, which was done after some years' delay. The strong wording of my report for this year in regard to the abuses resulting from want of space was received with an amount of criticism which perhaps was justified, but officially it was passed. Questions were put in the House of Commons as to the overcrowding and want of funds was the official excuse for it.

L.E. 1,000 was spent during the year in extending the male infirmary. A Cox-Walker electric control clock was installed with stations in every dormitory.

From this year onwards renewed attempts were made to improve

lunacy administration, increase the accommodation for the insane, and to control their treatment outside the Hospital to some extent. To reduce the high admission-rate, stringent orders were issued that only insane persons "believed to be dangerous" should be certified; later this order was modified to include "unmanageable cases," and so it remains to this day.

One effect of the order was that when the relatives wished to get an insane person sent to the Hospital for the Insane, they found it necessary to let him commit some offence. Thus the number of criminal lunatics was increased; or the relatives alleged dangerous conduct for the same purpose, although the man was really harmless. The provision of special accommodation at the local hospitals for the temporary use of the insane in the provinces was urged, and rooms were gradually built all over Egypt for them. As an example of the pressure for rooms at the Hospital, it was noted that in the year 1903 sixty-six patients certified as dangerous, and who had committed all sorts of acts of violence—stabbing, burning, homicidal assaults, suicidal attempts, etc.—were again discharged within a month of their admission, their average duration of treatment being only seventeen days! Of course, some of them soon returned, one after murdering his mother. None of them had been discharged without a careful consideration of their cases, and a comparison of their mental conditions with those of patients still detained. The situation was indeed grave, and indeed justified the wording of the annual report for 1902.

The procedure in the cases of criminal lunatics was considered by a committee; and eventually the Attorney-General issued a set of instructions ordering removal to the hospital for the insane for examination of all accused persons, whenever the plea of insanity was raised by the accused's lawyer or by the prosecution (see "Procedure" later on).

In the year 1903 a scheme was drawn up by me for extending the Hospital and incorporating the adjoining Egyptian Military Hospital with its ground of $6\frac{1}{4}$ acres, a new hospital to be constructed for the Army in place of the latter institution in another locality. The cost of the scheme was estimated at L.E. 23,500, and an increase of 395 beds would result if several new sections were built at the same time. In course of time this scheme had to be greatly modified.

L.E. 1,000 was spent in laying high-pressure fire-mains to all parts of the Hospital. An electric indicating fire-alarm installation with stations in every section was fixed.

Again the numbers in residence were only kept down by wholesale discharges of uncured patients.

In the year 1904 twelve additional beds were provided by building a villa for first-class paying patients, the total accommodation thus rising to 512 beds; but, to avoid the discharge of so many dangerous cases, overcrowding was allowed to the extent of 130 patients; the great drawbacks ensuing from this procedure can be imagined.

An English steward was appointed, his wife to act as matron. Until now I had done much of a steward's work, condemning every article of worn-out clothing, personally examining and passing all new clothing supplied, supervising the storekeeper's supplies, kitchen,

laundry, etc., and I was glad to depute much of this non-medical work to the new official, whose duties were those of head attendant and chief of stores. The need for a matron in the Hareem to control and train the attendants had long been obvious. Both of the new officials had been trained at Claybury Mental Hospital.

A new and stricter law prohibiting hasheesh was passed this year, and the use of this drug became less open than formerly.

In the year 1905, no further accommodation was added, and the numbers resident rose to 663; but we were hopeful of relief, and already new sections were being begun in the grounds of the Egyptian Army Hospital, and before long that old building would be handed over to us. The railway was also to be removed, and the 75 acres of desert surrounding the Hospital for the Insane and the Military Hospital were to be added to the former next year. L.E. 21,000 had been granted to cover the cost of the scheme.

Meanwhile I made a careful study of the type of hospital to be recommended whenever funds became available for the construction of a new institution, and the results were embodied in my Annual Report. The excellent report on German mental hospitals by a Lancashire Asylum Committee gave most valuable information; and its views and figures were freely used in forming my decision to recommend the villa-colony type of hospital for Egypt. The specifications necessary for such an institution were worked out and appended to my report, and have been followed out since. The situation and arrangement of the buildings were discussed, and the cost estimated. It was only necessary now to find the funds. The new hospital had been promised by the Government.

I was a member of a Commission appointed in 1904 to study the legal position of lunacy in Egypt, and in 1905 its legal member drafted a lunacy Law. As however, an extensive machinery was needed to carry out its enactments, no action was taken. It was, in fact, incomplete in certain directions.

The occurrence of cases of pellagra, clinically resembling general paralysis, was noted in 1904, thus repeating an observation made by Baillarger sixty years before.

During the year 1906, 120 beds were added by the construction of three new female sections in the Army Hospital grounds; the total establishment of beds thus became 640; the number of patients resident, however, rose to 750, so that the overcrowding went on. 316 uncured patients were sent out during the year.

The Egyptian Army evacuated their old hospital adjoining, and at once we had the 75 acres of land surrounding the two hospitals railed in, and at last had elbow-room and freedom from interference by the public. A number of the female sections in the hospital were

transferred to the use of the male patients. Roadways were cut through the old buildings to give access to the new sections.

Fire-escape doors were put in all over the upper floor of the old buildings. A new residence was built for the Director, his former residence being now occupied by his deputy.

Meanwhile a site on the desert at Khanka, eleven miles from Cairo, had been chosen for the new Hospital, and plans had been made by the Public Works Ministry based on my report referred to above, and for most of the year I was a member of the Committee formed to plan out the buildings. Nearly a square mile of land was taken over, and a light railway was laid down to reach the site. Before selecting this site we had visited possible sites in various parts of Egypt, but the cost of the land, except on the desert, was prohibitive.

In the year 1907 the adjoining Military Hospital building was remodelled, divided into sections, airing-courts, etc., and merged into the Hospital for the Insane, 237 beds being thus added. The total establishment now amounted to 877, but the number of patients still outnumbered the beds, being 896. Nearly 300 uncured patients were discharged during the year. The labour of planning the hundreds of alterations necessary in the old buildings took up many nights and "holidays," and required an elaborate working out of details. An additional sum of L.E. 6,000 was granted to complete the scheme this year. The offices were removed to rooms on the north side, where cool air could be enjoyed in the summer. The whole institution was remodelled, the main entrance being removed from the south to the north façade. Workshops, stables, large stores, etc., were now at our disposal. Every installation had to be rearranged to fit the new orientation of the institution, including the various electric apparatus, light, telephones, fire-alarm, night-control clock and drainage. Many new airing-courts were fenced in, and hundreds of trees planted. Hot-water pipes from a central boiler were laid down to all the new sections which were all furnished, equipped and put into use before the end of the year. The actual building work was supervised by the engineers of the Department of Public Health, their foreman taking instructions from me as to the details necessary. Many of the old buildings had to be repaved and reroofed. The cesspools in the old Military Hospital were filled up, and the mosquito plague finally extinguished.

The railway was now removed far to the south of the Hospital.

By this time twenty-eight separate airing-courts had been provided on a total area of nearly 100 acres, also 134 single rooms; three miles of fences and a mile of boundary walls had been erected. The staff has risen from 73 in 1895 to 250 in 1907, while the cost of maintenance rose from L.E. 8,000 to L.E. 25,000 a year.

7,500 patients had been treated in the past thirteen years, and the death-rate had fallen from $33\frac{1}{2}$ *per cent.* to 9.56.

The patients were now reclassified into twenty-four sections, the average area per bed in the dormitories being $82\frac{1}{2}$ square feet. The capacity of the Hareem dormitories was, however, not fully utilized and the area per bed could be reduced to 76 square feet. The single rooms had a content of 1,272 cubic feet each nearly double the allowance of English single rooms. The 50 square feet allowed in English associated dormitories would be too small in this hot climate, and dealing with such acute patients.

In thirteen years, 577 beds have been added at an average outlay of L.E. 91 $\frac{1}{2}$ per bed, including single rooms.

Taking the value of the old asylum palace and the Military Hospital at L.E. 40,000, the total cost per bed of the 877 beds now provided was L.E. 93,873, or L.E. 107 per bed. This included equipment of every kind.

A complete account of the work accomplished was given in the Annual Report for 1907 (70 pages).

I then drew up a programme of extensions for the next four years, and this was sanctioned; by it the number of beds was to rise from 877 to 1,067.

Meanwhile search was made in Cairo and Alexandria for old palaces or other buildings, where the excess of patients might be lodged until the new Hospital at Khanka should be built; but no suitable place could be found, so that the above addition of new sections at Abbâsiya was decided upon.

Many improvements were now made in the office work; new diet forms were devised, and much of the correspondence was replaced by printed forms. A special ambulance for the conveyance of the insane was bought. A new edition of hospital regulations was issued, and of attendants' rules. Clinical lectures on insanity were at length commenced, and were attended by the advanced students of the Cairo Medical School; they were no light addition to the work, being given on hot August afternoons.

This year a fatal case of plague occurred in the Hospital and caused some anxiety; no infected rats could be found. Much attention was given to the study of pellagra, and the proceedings of the Anti-Pellagrous Congress in Italy were watched.

Meanwhile, the plans of Khanka Hospital were completed, and preliminary work at the site was in hand.

This year had seen a great advance in the plans for housing the insane.

In 1908 L.E. 10,000 were granted for extensions of Abbâsiya Hospital and L.E. 15,000 for work on the projected hospital at Khanka. All sorts of improvements and additions were made at

Abbâsiya, and a new section for sixty criminal lunatics was commenced.

In this year the various administrative orders concerning the insane were collected and printed, and fresh orders were issued to check various abuses. An extensive trial of the atoxyl treatment of pellagra was made by Dr. Dudgeon, the Sub-Director of the Hospital, but the results were not encouraging.

An attempt to regularize the admission of foreign lunatics was made, and the Consuls were circularized.

In 1909 seventy beds were added by the completion of a new section of sixty single rooms and a villa for ten paying female patients. The number of beds on the establishment was now 947, but the patients in residence had risen to 1,017, although 175 uncured patients had been discharged. The pressure for space was much lower in the Hareem, and thus female patients were often able to remain under treatment until recovery. Thus forty-nine were discharged recovered (*cf.* eighteen only in 1896). It was now calculated that 150 beds should be added annually for several years to keep pace with the admissions.

L.E. 7,796 was granted for Abbâsiya Hospital to cover the cost of the two new sections, and another section of sixty beds was commenced.

A patients' workshop was built, but the pressure for beds necessitated its immediate conversion into a section for forty patients, and it still continues to be so used. Several additions and improvements were effected during the year, including a gate-porter's lodge, key room, attendants' lockers, etc.

L.E. 70,669 had now been spent on Abbâsiya Hospital.

L.E. 32,825 was granted for work at Khanka Hospital, and the buildings were well in hand.

In the census of the year 5,447 persons were described as insane—probably only a fraction of the real number existing in Egypt; 544 lunatics had been treated in local hospitals without certification, special rooms having been built for them in twelve hospitals.

I again served on a Committee to draft a Lunacy Law, and a new law was drawn up without further action being taken.

The death-rate fell to $6\frac{1}{2}$ *per cent.* on the total number treated, although an epidemic of typhoid fever occurred, due to a cook who turned out to be a "carrier." Two out of seven persons attacked died.

Heating apparatus was provided for the single rooms of several sections.

In the year 1910 the number of beds at Abbâsiya rose to 1,007 by the addition of another section of sixty single rooms. The number

in residence, however, rose to 1,304, although 327 uncured patients were released. No new funds were granted this year for Abbâsiya Hospital.

The construction of Khanka Hospital progressed, and L.E. 3,000 more was granted for it.

The dairy at Abbâsiya was suppressed this year much to my regret, on account of difficulties in the supply of forage. It was financially a success, and a great improvement on the old system of buying adulterated milk, to which we had again to revert.

Several circulars were issued to control the certification and conveyance of the insane.

The provision of increased accommodation was followed by a great reduction in the use of seclusion and hypnotics.

For the year 1911 L.E. 14,731 was granted for the extension of Abbâsiya Hospital, but no new sections were completed during the year. The number in residence rose to 1,327—an excess of 320 over the number of beds; 522 cases still insane were discharged. Meanwhile the first portion of Khanka for 240 patients was approaching completion, and buildings were commenced at Abbâsiya to hold 143 beds. Another search was made for some old Government building to house the excess insane population, and was again fruitless.

Nearly all repairs and renovations at Abbâsiya were postponed until the excessive overcrowding should be relieved by the opening of Khanka Hospital.

The ill-effects of overcrowding were very marked this year, and the labour of managing so many cases in such a small place was very trying.

In 1912 changes were effected in lunacy administration on the opening this year of the new hospital at Khanka for 240 beds. Also, the number of beds at Abbâsiya Hospital was increased by 143 on the completion of two additional sections, and the construction of new quarters for the assistant medical officers, their former quarters being adapted to the use of 43 patients. The number of beds at Abbâsiya thus rose to 1,150, and the total beds at the two hospitals to 1,390, but the number in residence rose to 1,651, including 61 criminal lunatics transferred from Tourah Prison to Abbâsiya. Thus, an excess of 261 patients remained (160 at Abbâsiya and 101 at Khanka), more exactly an excess of 281 male patients, while 20 female beds were for the moment free.

259 patients still insane were discharged.

913 new cases were admitted to Abbâsiya Hospital, and 380 were transferred thence to Khanka Hospital, while 434 cases were treated in local hospitals. A great increase in pellagrous admissions was noticed.

At Abbâsiya the increased accommodation necessitated a reclassification of the patients. The renovation of the depleted sections was now undertaken. New offices, pharmacy, medical officers' quarters and laboratory were constructed.

The death-rate then rose in 1912 to 16½ *per cent.*, the increase being evidently due to dysentery and enteritis. Anti-dysenteric serum was tried with some success.

The Hospitals for the Insane being under the Public Health Department, a new branch of that Department was formed under the name of the Lunacy Section; and I undertook its unpaid duties in addition to those of directing the chief hospital at Abbâsiya. The necessary administrative orders were given to homologate the management of the new hospital to that existing at Abbâsiya. A Central Lunacy Office was established at the Abbâsiya Hospital to control the work of the two institutions.

A decree was issued fixing the cost of treatment in hospitals for the insane, whereby the poorer classes were relieved of claims in this respect.

An order was issued for the removal to Abbâsiya Hospital for observation of convicts suspected of insanity. My duty of inspecting accused lunatics at Tourah Prison had already ceased on their removal to Abbâsiya, so that in future the certification of convicts also fell on me at Abbâsiya.

The hospital at Khanka, spread over a wide area, then consisted of six separate one-storeyed sections of forty beds each, besides the usual administrative buildings. Most sections were only provided with ordinary railings around the courts, and a few, intended for acute cases and runaways, with walls. To begin with, only quieter cases were admitted from Abbâsiya Hospital—in fact, its overflow.

Its cost, up to date, was L.E. 126,120, including land and railway siding.

Three additional sections were already commenced there, and another section was promised for 1913.

The administrative buildings were designed for 1,000 beds. Broad paths of soft sand intersected the buildings, and trolley lines served a part of the area. Eventually a branch of the State Railway line was laid into the Hospital grounds so that trucks could run direct from Cairo to the stores. There was no road to Cairo.

Houses for nearly all officials were built on the estate, and for a number of the attendants. Cattle-sheds, bakery, workshops, and most of the other necessary buildings were also completed. A high boundary fence surrounded the estate. An administrative block contained offices for the staff, a pharmacy, and living quarters for assistant medical officers. Water was liberally supplied.

Each section had an airing court with a large sun-shelter.

In fixing the sites of the sections account was taken of the prevailing summer winds (N. or N.W.), and latrines and stores were placed on the leeward aspect. Dormitories were to face the prevailing wind. The normal number of beds per section was fixed at forty. The buildings being of one storey, fire-escape doors were easily provided in all walls. Cross-ventilation was provided in every dayroom and dormitory.

Single rooms were allotted at least 36 cubic metres (1,254 cubic feet) each.

In associated dormitories, at least 6 square metres (63 square feet) were given per bed, $7\frac{1}{2}$ (74 square feet) in infirmaries. The floors generally were paved with lignolite (prepared from sawdust and magnesian chloride), but cement tiles were laid down in latrines and bath-rooms, kitchen and sculleries.

All windows were protected by iron grills, the rods of which were 4 in. apart. Thus the casement windows could be kept wide open, and free ventilation obtained.

The buildings were constructed of compressed sandbricks made on the premises.

The Hospital looked uninviting on the bare desert under a fierce sun and in glaring light; but as soon as its chief, Dr. Dudgeon, was appointed, he rapidly made it into quite an attractive, and in some seasons even a beautiful place. Without delay he planted thousands of trees—eucalyptus, wattle, and casuarinas; and in a wonderfully short time there was a large patch of green on the open desert. Even in the first year the change was surprising. In the first year he also made five kilometres of road, and carted in many tons of earth to nourish the trees, using patients' labour, and fifteen acres of land were irrigated and planted.

In 1913 no additions to either Hospital were completed, and the number of beds remained at 1,390, though the number in residence rose to 1,793, much overcrowding existing.

214 cases were discharged still insane. All new cases (865 in number) continued to come to Abbâsiya, while 287 quiet cases were transferred thence to Khanka Hospital.

The increased accommodation had a marked effect on the recovery-rate, as it rendered it possible to detain many cases until recovery, and to reduce the number of uncured discharges. The pressure for space being less in the Hareem, only twenty uncured women were released during the year, while 106 women were discharged recovered (*cf.* 41 in 1912), *i.e.*, $46\frac{1}{2}$ per cent. calculated on the admissions (228). This clearly brings out the previous ill-effect of the lack of accommodation on the recovery-rate. The proportion of readmissions now fell.

By this time special rooms for the insane had been provided in fifteen local general hospitals, usually one or two single rooms.

During the year the building went on at Khanka of the four new sections and various additions. Meanwhile I pushed for the further addition of five more sections there, the construction of a road towards Cairo, and other necessary conveniences.

The supply of water pumped up at Khanka was found to be inadequate, and more pumps were demanded.

Khanka Hospital now began to supply vegetables to the parent Hospital.

Meanwhile at Abbâsiya many changes had to be made to conveniently manage its increased population. Three mental nurses came from Claybury Mental Hospital to act as head attendants in the Hareem, and for them a house was built.

Dysentery and diarrhoea were rife at Abbâsiya this year, and scabies was very prevalent. Smallpox occurred in two sections; apparently the infection came over the boundary wall from the adjacent smallpox hospital.

The use of loose case-sheets instead of case-books was introduced. These sheets are kept in duplicate for each patient. The copy belonging to the section is used there by the medical officer, whose notes are copied in typewriting by the clerk in the hospital office. Thus a clear record is at hand.

Circulars were issued to reduce the prolonged residence of insane persons in local hospitals, temporary treatment there only being justified.

In 1914 the opening at Khanka of four new sections of forty beds each raised the total establishment of beds to 1,550 (1,150 at Abbâsiya and 400 at Khanka), while the number in residence rose to 2,016. As many as 1,037 new admissions arrived at Abbâsiya Hospital, while 400 quieter cases were transferred thence to Khanka. 297 uncured patients were discharged.

It was intended to build five additional sections at Khanka this year, so as to raise the accommodation of that institution to its projected first stage of 600 beds. Plans were finished and sites chosen, when the Great War broke out, and a local financial crisis suddenly cut off all funds, and the addition was postponed, and not completed until 1922. Thus for eight years the normal expansion of the accommodation was checked; and the greatest embarrassment was experienced in dealing with the now greatly increased admission-rate. As elsewhere, our plans for progress had to be postponed; and only very urgent changes were made.

Owing to the War the posts of Sub-Director at the two Hospitals remained vacant for some years; and the two stewards having joined the Army, most of the English staff was absent.

A small pathological laboratory was fitted up, and put into use at Abbâsiya, chiefly for the investigation of parasitic diseases (bilharzia, ankylostomiasis), and a systematic treatment of ankylostoma was again instituted.

At Khanka 55 acres of land were now irrigated and cultivated, and the evolution of the institution was being pressed on by its Director.

Meanwhile an important administrative crisis had arisen. Ever since certain changes had taken place in the personnel of the Public Health Department, in which administration the lunacy section remained until this year, difficulties had been experienced, especially from the attempt to place the hospitals for the insane under the same regulations as the general hospitals. The limitations of authority so caused made the position intolerable. It was also impossible to remain in a Department which apparently claimed to act as an authority in lunacy, although in fact it, of course, knew little of the subject.

My position became more difficult because the Office of the Lunacy Division which I administered in addition to my hospital work was, against my advice, now removed to Cairo, a distance of four miles from the Hospital. The physical impossibility of continuing to work at two such remote posts was apparent. I used to attend in the Cairo office sometimes five mornings a week, at a cost of L.E. 100 a year (of which only L.E. 18 was covered by a travelling allowance), and then conduct my hospital work in the afternoons and nights, a distressing effort in the hot weather. Much of the hospital work had to drift, as I was unable to do more than ten hours a day at office work in that climate.

For years I had pointed out in my annual reports the necessity of reforming administrative methods.

Having now a dossier many hundred pages long, showing how the progress of lunacy was being prevented by its present subordinate position, I appealed to the British agent in Cairo, and for the time some reform was promised. After a further year's experiences it was clear that a change must be made, and the Adviser to the Ministry of the Interior, Sir Ronald Graham, at length, in 1913, agreed to my demand that lunacy should be constituted an independent Division in the Ministry of the Interior with an office at Abbâsiya. The two Hospitals were placed under my charge, and I had to administer a central office for lunacy matters from April 1, 1914. Having its own budget, and being free to put forward its claims to other ministries without their being modified by an over-department with different aims and different methods, lunacy administration might be expected to make progress with less friction.

The outbreak of the war at this juncture, however, spoiled most plans, at first by the financial crisis, and later on by the demands made on all our energies by Army work, so for a long time lunacy administration made little progress. It had taken several years of conflict to free it, and now several years had to pass by before much progress could be derived from the new position. Nevertheless the changed administrative status greatly facilitated the work.

The first reform, now made possible by the change, was the proper organization of the transport of the insane from all over Egypt to the hospitals, which until now was done in a crude and objectionable way, lunatics in camisoles being conveyed by policemen in crowded third-class carriages. I obtained the issue of an order by the Minister of the Interior, regulating transport and ordering removals to be made in first-class reserved compartments on railways; first class had to be prescribed because no separate compartments existed in the other classes.

In the year 1915, no extension of the accommodation for the Egyptian insane was made, while the number in residence rose to 2,055—an excess of 505 patients over the number of beds. 487 uncured patients were discharged, 1,036 new patients were admitted to Abbâsiya, while 308 were transferred thence to Khanka Hospital.

The submarine menace affected lunacy administration by preventing the usual removal of European lunatics, who began to accumulate at Abbâsiya Hospital, where only accommodation for a very few cases existed, and their unhappy position caused considerable anxiety. It was also impossible to import English nurses for the same reason; also material for electric batteries and many other articles were no longer obtainable. Our food and clothing supply was also seriously interfered with, and in many ways the work was disorganized. Even the necessary drugs were no longer obtainable.

Twenty-one years had now passed by. Half-a-million pounds had been spent on the maintenance of the insane, and more than a quarter of a million on buildings for them. The Hospital population had risen from 440 to 2,055.

The extension of the war to the Egyptian Frontier necessitated a large British Army in Egypt, and Abbâsiya being a military camp, the Hospital was surrounded by troops. The necessity of providing a special hospital for the numbers of military cases suffering from mental disorders arising in the near East becoming urgent, I hastily organized a separate establishment in an empty house formerly occupied by me. It contained twenty beds, and after being staffed by Egyptian attendants for a while, it was given a staff of R.A.M.C. orderlies, all of whom had had experience in English mental hospitals; thus a valuable trained staff was available. The fine shady gardens and attractive day-rooms were appreciated by many of the inmates. 100 soldiers were treated there during this year. The Egyptian medical officers took a share in the management, examining the admissions and noting the cases. Besides being in command of this military hospital, I was appointed mental consultant to the Army, and attended cases at the various other military hospitals, all these military duties being honorary.

Meanwhile, the duties of the new lunacy administration developed

in various directions, and the work of the Hospitals was kept going ; even a few additions and improvements were made, *e.g.*, at Abbâsiya the improvement of the water supply, and the substitution of water drainage for the horrible pail system ; a new laundry was built, and many other smaller changes.

An epidemic of typhus and relapsing fever among the staff at Abbâsiya was a source of anxiety.

At Khanka the machinery was extended and repaired, and various smaller improvements effected. Thus, extensions were made in the water supply there, and another well was sunk. The power-house was extended and rearranged. The farm now produced plenty of vegetables and milk. The growth of trees and the liberal supply of water greatly improved the site.

Further instructions were now sent on my proposal directly to the local authorities and police by their minister as to the classes of cases to be certified, and as to their transport and care, and steps were taken to control compliance with the instructions.

In the year 1916, in spite of the forced discharge of 575 uncured cases, the number in residence in the two hospitals rose to 2,104—an excess of 554 over the number of beds : 970 Egyptians were admitted to Abbâsiya Hospital, while 284 quieter cases were transferred to Khanka : 324 British soldiers were also admitted to the Abbâsiya annexe, called “ M Special Military Hospital,” besides 19 Indian soldiers and 32 military prisoners—a total admission of 1,345 cases on 1,170 beds. The work had now become very heavy, and having no English colleague at Abbâsiya to share the work, it was impossible to obtain any respite. Even the office work was kept up until late at night for seven days a week. It was indeed fortunate that the Lunacy Department Office being now situated at Abbâsiya, I had no longer to waste time on the road to Cairo.

Abbâsiya Hospital was kept in a state of disorder by the cutting up of all its roads to lay the new drains and the installation in all latrines of cisterns and proper flushing apparatus. Towards the end of the year the institution presented a disordered appearance, and embarrassments of many kinds burdened its administration. The roads remained up waiting for drain-pipes from Europe, delayed by submarines ; the patients’ new clothing also vanished by the same means to the bottom of the ocean, and little material of any use for the insane was obtainable in Egypt. Under the stress of work I found I could no longer keep up with the rapid pace, and had to take a long leave in England. Dr. Dudgeon conducted the work of the Lunacy Office and of Abbâsiya Hospital during my absence, and of “ M Special Hospital,” while Dr. Mohamed Bey Fuad superintended Khanka Hospital temporarily.

Various improvements went on at both Hospitals with such funds as were provided, the financial crisis now turning to a boom as the price of cotton soared. It was still impossible to build owing to the scarcity of material, and its high price, and military control.

The supply of vegetables from Khanka Hospital to Abbâsiya ceased when the cultivated area there was reduced. A road to Khanka from Cairo was put in hand.

The procedure as to the mental examination of Government employees suspected of insanity was regularized.

The cost of transport of the insane was made gratuitous for the poorer classes, and limited to the price of one third-class ticket for other classes.

An order was issued prohibiting the removal to the hospitals for the insane of political and religious cranks who disturbed public order, unless duly certified.

Two lunatics having been locked up in a single room in a local hospital, where one murdered the other, this extraordinary practice was prohibited, and instructions were issued for the management of the insane in local hospitals. The necessity of issuing many of the rules, which would be quite superfluous in England, gives an insight into the Egyptian attitude towards the insane.

An Army medical officer with experience in English mental hospitals was detailed to assist me at the Army Mental Hospital; he also acted as Sub-Director of the Asylum, and I thus obtained some relief.

In the year 1917 (¹) the large admission-rate of Abbâsiya Hospital was at length relieved by the direct admission of 266 pauper male cases from the Provinces to Khanka Hospital, while 953 cases were admitted to Abbâsiya Hospital (including 157 military cases). The total combined establishment of beds (1,550) remained unchanged. 537 uncured patients were discharged. 2,118 patients were now in residence in the two institutions.

The recent rise in the admission-rate appeared to be due to a higher insanity-rate in the provinces, probably of the pellagrous type.

The provision of a makeshift road to Khanka utilizable only in good weather had enabled that Hospital to take direct admissions.

On account of the bad state of the new road, nearly half of the Khanka cases had to be temporarily admitted at Abbâsiya—a considerable drawback.

In this year the drainage of Abbâsiya Hospital was completed—a great hygienic advance. The British Army at this time incinerated their manure heaps, and cleaned up the surrounding desert. The fly plague at once decreased to a remarkable extent, and so long as manure was so treated, they were no longer a serious nuisance.

The free treatment of all patients in the ordinary wards was now decreed. If relations made payments, extra diet or better quarters were to be furnished in return. This beneficent change relieved the poor from much harrying.

In this year a large number of criminal lunatics (52) were discharged to make room.

In the year 1918 the high admission-rate at Abbâsiya was further relieved by apportioning to Khanka Hospital the ordinary male cases arising everywhere in Egypt, except in Cairo, amounting to 382. Abbâsiya thus had to make room for all female admissions, all criminals, all paying and consular cases, and all cases arising in Cairo, besides military cases, amounting to 851: 489 patients were discharged still insane.

The death-rate continued to rise, and was about double the pre-war rate, as in England. Influenza was a factor in the increase. The death-rate in the public mental hospitals of the two countries had been in 1917 exactly the same—17·4 *per cent.* on the average number in residence. In 1918 the Egyptian rate was a little the higher of the two.

The need to extend the quarters of the assistant medical officers at Abbâsiya necessitated the merging of the rooms used as a laboratory into their residence.

The Army mental hospital, having completed its work, was closed down at the end of the year: 780 mental cases from the British Army had been treated in it.

Among other improvements an electrolyzer was installed in the laundry. The solution of chlorine compounds produced by it disinfects and bleaches the clothing, and has brought about a great decrease in the endemic scabies.

I made a special report on the future requirements of the insane, with estimates of the insane population to be expected, and of the asylums required, their cost and sites.

I attended a Committee on Lunacy Law, where a new law was drafted. The political crisis of the spring of 1919, however, stopped action being taken. Various circulars were issued regulating the transport of the insane, etc.

In the year 1919 the number of beds available for the insane was increased by 31 on the addition of annexes to the villas at Abbâsiya for paying patients (male and female). The total number of beds was now 1,581 (1,181 at Abbâsiya and 400 at Khanka), while the inmates numbered 2,109. The riots in the spring having broken off railway communications for several months, the annual admissions only amounted to 919, while 430 patients were discharged still insane. The number of deaths fell to an extraordinary extent, there being 200 fewer deaths than in 1918; the death-rate fell from 21 *per cent.*

to 11·9 *per cent.* I attributed the fall chiefly to an improvement in the diet to be mentioned later on. (The death-rate in English mental hospitals also fell from 19·56 to 12·55 at the same time.)

Owing to shipping difficulties it was still impossible to remove European patients to their countries, and their accumulation at once filled the additions to the paying villas as soon as completed, and the villas have remained overcrowded ever since.

During the riots Khanka Hospital was completely cut off from Cairo except by aeroplane. The Director, Dr. Dudgeon, with his family stuck to his post, and was able to get a guard of British soldiers. The difficulty of keeping up supplies there may be imagined. The road was broken up and the bridges destroyed, and the railway signal boxes burned down.

I examined various sites at and near Alexandria, and obtained approval of the proposal to build a reception house in Alexandria, and a hospital for the insane some miles east of that town on the coast. Sites were eventually chosen, and negotiations commenced for their acquisition. The political situation, however, prevented our proceeding further in the matter. The disorganization of the Government, strikes of employees, clerks, medical officers, etc., the lack of transport, and the failure of the train service and of food supplies kept us busy enough simply trying to keep the institution going, without thinking of the future. Self-determination was proving to be an infectious mental disorder, and ordinary duty took a back seat. The murder of British subjects in Upper Egypt and the street battles in Cairo made the so-called peace far more disturbing than the previous war.

Pellagra meanwhile had broken out severely in the Armenian camp at Port Said, and among the Turkish prisoners, and Commissions were engaged investigating its causes.

In the year 1920 the number resident in the two Hospitals rose to 2,195—614 more patients than beds. The admissions rose to 1,170, while 707 patients were discharged still insane. The death-rate fell still further to 9·7 *per cent.* (in England 8·74).

The financial depression prevented the commencement of any new scheme; but five new sections at Khanka, and one at Abbâsiya, planned in 1913, were now under way, also several residences for staff. The road to Khanka was remade, and macadamized, and is now in good order for most of the way.

Smallpox broke out again in Abbâsiya Hospital; apparently the infection again came from the adjoining Fever Hospital.

Dr. Mohamed Bey Fuad, who had acted as assistant medical officer at Abbâsiya for many years, was now promoted to be sub-director.

In the year 1921 the number of beds was raised from 1581 to 1841

by the addition of a section for sixty female patients at Abbâsiya and five sections containing 200 beds at Khanka. The number resident meanwhile rose to 2,364, so that there was still an excess of 523 patients at the end of the year.

The admissions amounted to 1,068, while 529 patients were discharged uncured.

The extensive additions gave relief for a time, but the accommodation even thus extended is not nearly sufficient for such a high admission-rate.

Several residences were built, for the sub-director at Khanka, for each of two assistant medical officers there, and for each of four assistant medical officers at Abbâsiya. The drainage system at Khanka was extended, new pumps provided, and a large septic tank made.

A site at Alexandria was acquired for the construction of a reception house later on.

Owing to failing health I was absent for half the year. The acute political crisis delayed schemes for further extensions, and the financial slump continued. Until a solution of the crisis was found we had to mark time.

The codification of the various regulations in lunacy was now undertaken with a view to fixing them by *arrêté*, pending the promulgation of a lunacy law.

During the year 1922 the number of patients resident rose to 2,491—an excess of 650 over the number of beds provided. The death-rate fell to 7·6 *per cent.* of the average number resident.

The want of room again necessitated the discharge of a large number of uncured cases.

I was again absent for five and a half months, and I retired from the service in October, 1923.

(*To be continued.*)

(¹) The year henceforward coincides with the financial year from April 1 to March 31.

Clinical Notes and Cases.

Folie à Deux. By WM. McWILLIAM, M.B., Ch.B.Glasg., Senior Assistant Medical Officer, Inverness District Mental Hospital.

THE relative rarity of cases of *folie à deux* provides the reason for the publication of these notes, together with a comparative simplicity of the mental mechanisms on the side of the passive agent.

A husband and wife, æt. respectively 37 and 33, were admitted to the Inverness District Mental Hospital on August 1, 1922. They had been married in January, 1919, and there were no children of the union. During the war the husband had

seen service in the Navy, and having been demobilized with the usual gratuity, had settled in Inverness district. The gratuity had been sunk in small business adventures, all of which had been total failures. His last attempt at settlement had been as a market-gardener, but this, too, had failed to prosper, involving much financial worry, complicated by a disagreement with a neighbouring farmer over a lease of some ground.

Family histories : Husband.—Father and mother, no recorded mental disorder, but sister of mother insane, and of patient's brothers, one committed suicide by drowning, and a second was a patient in this hospital in 1908.

Wife.—History negative for the psychoses, but it transpired that a brother had suffered from shell-shock.

The events leading up to the admission of the patients are summarized in the following :

1. A local newspaper reported : " On Monday morning it was discovered that the house occupied by a market-gardener and his wife had been totally destroyed by fire. . . . It was also alleged that the man recklessly discharged firearms to the alarm of the people in the neighbourhood."

2. Police report : " They said people in the district were practising witchcraft upon them ; that a man employed by Mr. W—, farmer, had wafted a mysterious influence from the surface of a mill dam, which woke them both in the night, feeling that they were chloroformed, also that their horse had taken sick and their calves died as the result of witchcraft, and that the neighbours' children had placed twigs or sticks crossed here and there on his property ; also M— (the male patient) said he had seen an old woman circling on the roadway and waving her arms, all of which, he said, was proof of the practice of witchcraft. M— said he was not afraid of anyone, and I consider it would be dangerous for any stranger to wander on his property while he suffers from these beliefs. . . . Mrs. M— also said a neighbouring woman had tried ' to put the evil eye on her.' "

3. Police report : " I requested the male accused to accompany me to this office. He consented on condition his wife came too. Both then came to the office, and after considerable difficulty, as both were insanely suspicious of a ' trap ' being set for them, I got the male accused alone in the Inspector's room. . . . Male and female accused, being obsessed with the idea that if they were separated, a magician would influence the wife, I saw it would be necessary to enforce the warrant in the case of the female accused also."

Showing such evident signs of mental disorder, on August 1, 1922, the husband and wife were admitted together, and the following are the facts from their medical certificates :

Husband.—Very excited and voluble ; complains of enemies having tried to burn down his house, and of having burned it down. Has delusions that people are practising witchcraft on him with birds.

Wife.—Very excited ; states that people are practising witchcraft and magic against her ; that evil birds are hovering round the chimney and sending evil stenches into the house.

On admission the husband was excited and garrulous, and bore an air of injustice. He was interested and sociable and well oriented for all dimensions. Memory showed no signs of defect. The wife, on her part, gave an impression of emotional instability, alternately weeping and laughing in an " hysterical " fashion. She, too, was well oriented, but when questioned as to witchcraft and magic, denied the reality of what had been her delusions, whereas the husband remained silent and uncommunicative.

The cases progressed thus :

August 2, 1922 : Husband : Reticent and guarded in his conversation ; affective state one of mild exaltation.

Wife : Mildly depressed and uncommunicative.

August 3.—H.: Very excited. Resists examination of his pupillary reflexes; apparently believes he is being hypnotized; appears to be praying at times, and when asked what is wrong with him, states he requires help from God against his persecutors. He is being done injury to by a sort of Black Hand gang, headed by a neighbouring farmer. "Is the Doctor free from the influence of the gang?" he asks. He totally lacks insight.

W.: Very unstable emotionally; tells a very pathetic story of a fight against adverse circumstances; at times weeps, and at times smiles.

August 4.—H.: People began to work against him by the aid of mesmerism; wants the British Legion and Earl Haig to take his case up; persists he is well mentally.

W.: Wrote sister saying that "these people would stop at nothing to gain our bit of land."

August 7.—W.: Has been sleeping better during the past few days, though still somewhat unstable emotionally.

August 22.—W.: Improvement has been maintained, and she has now fair insight.

September 15.—H.: Working and sociable, though there is little doubt but that his persecutory ideas persist. He states he has no desire for revenge, and intends to forget the past.

W.: Appears to be in her normal mental state.

On October 5, 1922, both patients were discharged together to the care of their friends. The wife had fully recovered, and possessed good insight, while the husband had, for the time being, his delusional ideas under control, and was again in touch with reality. He had no insight into his illness.

Diagnosis.—Husband: Paranoia in the second stage. Wife: Hysteria.

The husband and wife met at frequent intervals, but this fact did not seem to prejudice the prognosis in the individual cases.

Before her marriage the female patient had been for some years a nurse in a southern mental hospital, but this proved no defence, rather seeming to help her to accept the suggestions of her husband in taking the line of least resistance, and flying from reality. The husband was much the stronger personality.

The police report that the male and female accused were obsessed with the idea that if they were separated a "magician" would influence the wife is also interesting, as was a letter written by the husband on August 4. He had only consented to go to the police office on condition that his wife went too. He was still in the stage that he required help in the formation of his delusional scheme, and that help was obtained by forcing his ideas on his suggestible wife. Her acceptance of them sufficiently bolstered up his own ego-complex. After admission and the consequent separation, the scheme suffered a check—the more ancient and primitive witchcraft ideas were substituted by more modern ones connected with hypnotism. His letter of August 4 stated: "I know the whole thing now, and we were subjected to the influence of hypnotism—not witchcraft, as we imagined. Everything is perfectly clear to me now." It proved only a temporary check to the progress his wife was already making,

for his sudden change of outlook could not but affect her attitude in her state of mental flux. "I imagined" was also to her a happy phrase.

A new environment in hospital, a little explanation and persuasion, and the promise of a new beginning in her home country among friends provided the wife with the solution of her conflict. The husband, with the same opportunities of making good, could but forego revenge and attempt a further repression.

This example of *folie à deux* serves to emphasize how imaginary is our borderline between the psychoses and the psycho-neuroses.

I have to thank Dr. T. C. Mackenzie for permission to publish the notes of these cases.

Medico-Legal Notes.

HARNETT v. BOND AND ADAM.

An action seriously affecting the interests of the medical profession has been brought by Mr. William Smart Harnett, a farmer, of Springfield, Newington, near Sittingbourne, Kent, against Dr. Charles Hubert Bond, a Commissioner in Lunacy, and Dr. George Henry Adam, the manager of a house for the reception of lunatics at Malling Place, West Malling, Kent, and the hearing, including the argument on the jury's findings and the delivery of the judgment, before Mr. Justice Lush, in the King's Bench Division of the High Court of Justice, lasted from February 7 to 29—seventeen days in all. The action was for damages for alleged conspiracy, assault, and false imprisonment, and the jury on the fifteenth day returned a verdict in the plaintiff's favour, awarding a sum of £25,000 as damages. In the preparation of the following account we have made much use of the reports published in the *Times*.

Case for the Plaintiff.

The plaintiff's case was that on November 10th, 1912, he was received as a private patient at Malling Place on a reception order made by a justice of the peace on certificates signed by Dr. Henry Fisher, of Sittingbourne—against whom an action is pending for having so signed—and the late Dr. Penfold, of Sittingbourne. He was detained there until December 12, 1912, when Dr. Adam, with the consent of two visiting justices, permitted him to be absent on probation for twenty-eight days. On December 14, 1912, the plaintiff alleged that while in a room at the offices of the Commissioners in Lunacy, Victoria Street, Westminster, the defendants conspired to

cause him to be detained there and afterwards to be removed to Malling Place—Dr. Bond causing him to be detained from 11 a.m. until 2.30 p.m., and Dr. Adam ordering two keepers to go to the offices and bring him back to Malling Place. Plaintiff was confined at that place until February 22, 1913, and thereafter was kept in various reception houses until October 15, 1921, when he escaped. He was thus rendered unable personally to carry on his business and manage his property. By an order in lunacy made on July 17, 1913, his wife, Mrs. Dorothy Isobel Harnett, was appointed manager of his property, but by another order made on December 12, 1921, it was restored to him.

Mr. J. B. Matthews, K.C., in his opening, said that Dr. Bond, as an individual Commissioner in Lunacy, had no more right to give anybody into custody on the ground that the person was a lunatic than any member of the jury had. The complaint with regard to him was that on December 14, 1912, with a heartless lack of consideration for the plaintiff, and a courageous braving of the law, he arranged for the plaintiff to be illegally taken into custody and taken back to Malling Place. For eight and a half years Mr. Harnett had been incarcerated in asylum after asylum, although he was absolutely sane throughout that time.

The plaintiff, in his evidence, said his mind was quite all right up to October 30, 1912. When his first wife died in 1908 he had an idea that he had taken some germ from her which set up a condition of nasal catarrh, and, his doctor pooh-poohing it, he went to a quack in Chatham in October, 1912, and received three injections of tuberculin, which brought him to death's door—he suffered agonies physically, and was in a high state of fever and delirium. In fact, he was absolutely out of his mind for several days towards the end of October, 1912, being placed in the care of male nurses for five days. He was an absolutely sane man when he was sent to the asylum. When he went to the offices of the Commissioners in Lunacy on December 14, 1912, he told Dr. Bond that Dr. Adam had said that he was free for twenty-eight days, and that he was under the care of his brother, Arthur Harnett. He remained at the offices for a considerable time as he thought his case was being looked into, and about luncheon time he tried to go out for refreshments, but a clerk repeatedly blocked the way. About 2.30 p.m., Dr. Bond came in with two keepers and seized his wrists, saying that the keepers were two of his (Harnett's) friends who were going to take him back to Malling Place. When he returned to the asylum he was put under rigorous treatment, kept with the worst maniacs at night, and threatened with the padded cell. He never offered violence to anyone during the whole of the proceedings. When on January 13, 1913, he wrote

to Dr. Adam : " The good old dog fox when he is nearly caught turns round and faces the whole pack," he wanted the doctor to face the Commissioners and to send him home. From Malling Place he was transferred to a home at Croydon, where he remained for four and a half years. He acted as librarian, and for his work of cataloguing over a thousand volumes he was thanked by the authorities. He was transferred from asylum to asylum until he reached one at Aylsham, Norfolk, and while there he wrote to the Lord Chancellor asking why he was being detained, the Lord Chancellor replying that he found on inquiry that he (plaintiff) was unfit to be discharged. He thereupon wrote to Dr. Bond that unless he denied the Lord Chancellor's statement, he would consider the doctor had broken faith with him, and that, therefore, it would be within his rights to break faith with the doctor in the matter of his parole. He then escaped from Aylsham, and for a fortnight evaded the vigilance of the police and his wife and his brother. As under the statute the power to recapture must be exercised within fourteen days, he became a free man once more. He was afterwards examined by eminent doctors, from whom he had affidavits as to his complete sanity.

The plaintiff called several witnesses who deposed to his sanity.

Mr. A. A. Norman, a solicitor, said the plaintiff was perfectly natural when he saw him professionally just before the plaintiff went to see Dr. Bond in December, 1912, and also when the witness saw him at a Croydon institution in June, 1913.

The Rev. J. W. Jones said that plaintiff presided at brotherhood meetings at his church at Bournemouth in 1918, read the Scriptures, led the prayers, and gave addresses, and he saw nothing abnormal about him.

Dr. J. S. Risien Russell, who examined the plaintiff in November, 1921, said that as a result of a long interview he certified the plaintiff as capable of looking after himself and his affairs.

Dr. A. C. Morton, of Aylsham, Norfolk, who visited the plaintiff at the Aylsham home on the instructions of the Commissioners in Lunacy, said that when Mr. Harnett in June, 1921, brought one of the Commissioners, the Hon. John Mansfield (now Lord Sandhurst), to him, he (Dr. Morton) told Mr. Mansfield that if the plaintiff was a free man he would refuse to certify him. This witness had made various reports on the plaintiff's condition, and these were put to him by the Attorney-General (Sir Patrick Hastings), K.C., who appeared for Dr. Bond.

May 14, 1920 : " Talkative and excitable. Has some religious mania. Says he will give up his farm and devote all his time to the saving of souls."

June 11, 1920 : " He appears to be under the impression that he is being persecuted."

Dr. Morton said the above did not amount to a statement that the

plaintiff had religious mania, but that he was a religious enthusiast—"something like the Salvation Army."

Dr. T. B. Hyslop said that he examined Mr. Harnett in November, 1921, and found no reason why he should not be given the administration of his own affairs.

Case for the Defendants.

The Attorney-General, in his opening, said that Dr. Bond was represented by the Crown because he acted in his capacity as a Commissioner in Lunacy and not as a private individual. No one could doubt that the case raised questions of importance greatly exceeding that of the issues affecting Mr. Harnett. He had been considering what, if any, statutory protection could be introduced now to ensure that no person hereafter should remain in an asylum without independent investigation. The best protection, one would think, would be that at stated intervals an absolutely independent doctor should be called in by the alleged lunatic or his friends, and if there was any question of disagreement the patient should have an absolute right to a second independent opinion. One of the great difficulties in dealing with mental cases was that nearly every one of them thought that they were wrongfully detained. All that one could do was to get the best advice obtainable.

Mr. A. Neilson, K.C. (for Dr. Adam), mentioned the fact that Mr. Harnett's mother was insane.

Dr. Bond, in his evidence, said that on December 14, 1912, he was at the offices of the Commissioners in Lunacy, when the secretary informed him that there was an excited lunatic in the waiting-room who insisted upon seeing a Commissioner. The file of papers relating to the plaintiff's case was brought to him, and, after he had read them, he went and saw Mr. Harnett, but could not find out from him what was the reason for the visit. The plaintiff talked incoherently, using scraps of phrases and not finishing his sentences. He wildly flourished a bag which jingled as though it contained money, and witness gathered that he had obtained money from a bank. He did not sit down and put his face close to the plaintiff's, nor was Mr. Harnett supplied with a cup of tea. When the witness had his back to the fireplace the plaintiff put each of his hands on the mantelpiece, encircling the witness with his arms. He became more and more excited, and after half an hour had elapsed, the witness formed the opinion that the man was insane and quite unfit to be about unattended. He had no fear personally of the plaintiff, but he thought the average person would have been afraid. Upon referring to the file he found that the plaintiff had been at Malling Place, so a telephone message was sent to that address. The witness was informed by

Dr. Adam that the plaintiff had been placed in the care of his brother and given leave of absence, but that he had escaped from his brother. Witness informed Dr. Adam that the man was unfit to be about by himself. A motor car was sent for to take the plaintiff back to Malling Place, and in the meantime he was made as comfortable as possible and supplied with refreshments. The witness had no recollection of taking hold of the plaintiff's wrists.

Dr. Bond, cross-examined, said it was not usual for the Commissioners to disclose to a patient the grounds on which he was certified, but no one could be confined in an asylum for years without knowing the reason, because it was the practice for doctors to supply the information in conversation with a patient. The plaintiff remained at the offices of the Commissioners in Lunacy of his own free will until the keepers arrived from Malling Place, and he went away quietly with them. The clerk had no instructions to prevent him going out. If the keepers took Mr. Harnett by the arms, he called that friendly compulsion. He did not remember the plaintiff telling him that the post office officials at Newington were religious, and that one of them had said to him: "The Lord bless and keep you to the end." The Commissioners in Lunacy tried to get patient out on probation, and had no desire to curtail leave. One of the reasons why he thought the plaintiff ought not to be at large unattended was that the man was excited and flourished his bag containing money, and he (witness) told the plaintiff this on February 1, 1921.

Mr. Justice Lush: Was that the only reason you gave him for sending him back?

Dr. Bond: I told him he was excited, not himself, and not in a fit condition to be out on probation, and I spoke of the money in the bag.

Mr. Justice Lush: The strange thing about it is that the note the clerk made in December, 1912, did not mention excitement, the bag of money, or that he was not himself.

Dr. Bond: The note was not made by us together as a careful, formal report of all that transpired; neither was it meant to be inclusive of everything that the clerk or I saw.

Dr. Bond, further cross-examined, said the plaintiff was in a delusional state in the early part of 1921, and was under certificate and in charge of highly trained nurses.

Mr. Justice Lush: It was only because he escaped and obtained independent opinion that he was found to have recovered?

Mr. Matthews: The Attorney-General has said Mr. Harnett was on the brink of release when he escaped.

Dr. Bond, asked by the judge to give an opinion of Mr. Harnett's present state, said Mr. Harnett had given his evidence in a perfectly

coherent, sensible manner. Witness had never personally examined Mr. Harnett as to his mental state. He did not mean that he thought Mr. Harnett had not recovered, but he should like to leave his responsibility for that open.

Mr. Justice Lush thought it was common ground that the trouble had passed away.

Mr. Harold Morris, K.C. (appearing with the Attorney-General for Dr. Bond) : So it has so far as I and the Attorney-General are concerned, but no medical man would express an opinion until he had satisfied himself by examination, and Dr. Bond says that he has not examined the plaintiff.

Lay witnesses spoke to interviews with Mr. Harnett on November 6, 1912, to his then going on his hands and knees, and grovelling about on the floor, and to his asking one of them to spell "parallelogram."

Mr. Charles Mitchell Moir, a reporter, spoke of an interview with Mr. Harnett on November 9, 1912. He went in response to a telegram from Mr. Harnett, and he thought plaintiff, who had a wild expression, was not in his right mind. The interview lasted nearly an hour, and in the course of it Mr. Harnett reclined on his bed and described a vision he said he had had. Then Mr. Harnett went with the witness into the dining-room, where he fell on his hands and knees, and bowed his head to show the witness what he did when he had had a vision of the Deity.

Cross-examined, Mr. Moir said Mr. Harnett told him he had been ill from an overdose of vaccine, but the witness thought he had imagined it. He did not know the plaintiff was apprehensive of being sent to an asylum.

Mr. Arthur Harnett, retired civil engineer, London Road, Bromley, younger brother of plaintiff, against whom an action is pending on the ground that he was the person who originally caused the plaintiff to be sent to an asylum on November 10, 1912, spoke to plaintiff's alleged delusions. His brother had told him he had seen a bright light, "brighter than the lightness of the day," and also that he had become suddenly mad, having to be held down. Then his brother ordered witness to "clear out," and Mrs. Harnett left with the baby and nurse. Witness thought his brother insane and engaged a man to look after him. He had also seen his brother addressing groups of men in the village to demonstrate his sanity. When the plaintiff was released on probation it was arranged that he should go home, but plaintiff stipulated that the witness should not walk with him in the village street. Next day the plaintiff went to see the Commissioners in Lunacy; he would not travel with the witness, but went into the next compartment. When the train reached Victoria the plaintiff gave him the slip.

Cross-examined, he did not think the plaintiff was likely to offer violence to his wife at the time she left the house. He had never once visited his brother during the eight years of his confinement. His brother had sworn vengeance against him, and he understood that he was quite a dangerous lunatic. The plaintiff's objection to his mother-in-law "struck me as rather irrational." His brother had knelt down and prayed for him, while tears poured down his cheeks. He thought it strange that his brother should begin to call him "Arthur, dear Arthur." He did not think he could mention any specific delusions, but he thought his brother had delusions about his wife.

The Attorney-General: Your brother has suggested that in his view his wife used you and Dr. Penfold to get him put away. Is there any truth in that?—Certainly not.

Dr. Adam, in his evidence, said in 1907 he joined his father, who owned the mental home at Malling Place, and when his father died in 1908 he had complete control of the home. In November, 1912, Dr. Penfold telephoned asking whether he could receive Mr. Harnett, and when he examined Mr. Harnett on admission he thought that he was maniacal. His condition improved, however, and the witness took steps to let him out on probation for twenty-eight days. The form of leave of absence order issued in the case of the plaintiff was the same as was used in other cases. It bore the proviso that the medical officer "shall at any time before the expiration of the said period have power to take back the said patient into the licensed house if his mental condition requires it." The plaintiff left on December 12, with his brother, who had undertaken to take charge of him. On December 14, 1912, the witness received a telephone message from the offices of the Commissioners in Lunacy saying that the plaintiff was interviewing the Commissioners and that he did not appear to be in a fit state to be at large. The only thing he could do upon the receipt of such a message was to act under the provision in the order, and send for the patient. This the witness did, sending two keepers, who brought the plaintiff back in a motor car. Upon arrival at Malling Place, the plaintiff was in a very excited state and much worse than when he went away. He had the delusion that he was going to be injected with drugs, and also that people were persecuting him, and that he was suffering from various diseases, one being a tuberculous throat. The plaintiff finally left Malling Place on February 22, 1913, and after that date witness had nothing to do with him.

Cross-examined, Dr. Adam said as soon as a patient was received he tried to ascertain whether the grounds of certification were well founded. He never heard that two men accompanied plaintiff to

the asylum to protest against his incarceration. That a man should address his friends and neighbours asking them to testify to his sanity was not by itself indicative of insanity. That a man had had acute mania on October 29, 1912, caused by an injection of tuberculin would not of itself show that he was insane on November 10, 1912. That a man should feel that he had a "call" to preach in the hope of saving souls was not evidence of unsoundness of mind. That plaintiff should communicate with the Governor of Borstal Prison asking for leave to address the prisoners was a rather suspicious circumstance; it was not a sensible thing to do. Nor was it evidence of insanity that plaintiff should collect and harangue villagers in the street. He admitted that the certificates giving the above as grounds of insanity were not very strong, but added that all the facts taken together would be evidence of insanity. The strongest evidence was the letter addressed to "Dear Postal Officials," and beginning: "Jesus has touched my eyes." He was not aware that this was a Biblical quotation. He thought the whole letter was indicative of insanity. When the plaintiff arrived at the home his aspect was wild.

Mr. Matthews: Would a sane man taken into an asylum be tame or wild?—Wild, I should think.

Witness said plaintiff talked incoherently and ramblingly on religious subjects, and that was evidence of insanity. In fact, he was shouting. The plaintiff was probably present at the week-end entertainment following his admission, and even if he were incoherent otherwise he might have given a coherent recitation from *Alice in Wonderland*. He admitted that a statement made to Mr. Arthur Harnett in a letter in November, 1912, that his brother had made no complaints was untrue; it was a mistake. If the plaintiff still believed that he had a tuberculous throat after a throat specialist had said he had not, that would be a delusion. Plaintiff also thought that he had cancer of the throat. There were many drugs with which people might be injected in such a way as to put them out of their minds. Mr. Harnett had a delusion that he might be treated in such a way. In witness's opinion, it would not have been a breach of the conditions of the plaintiff's leave if he had left his brother and gone to see the Commissioners. He did not think the plaintiff's desire to go and live with Lord Wolseley was a delusion, as it might have been explained by the fact that Mr. Harnett, as a believer in the efficacy of prayer, found a kindred spirit in Lord Wolseley. Witness did not see the plaintiff's letters to the Lord Chancellor, or plaintiff's entries in his diary. Counsel read the letters, and the witness agreed that it was a fair inference to draw from them that the plaintiff was beating against the bars of his cage and struggling for freedom. Although

plaintiff's condition varied while he was at Malling Place, he was always inclined to be dangerous, and witness had entered in his case-book: "Actions uncontrolled; jumping from one seat to another; throwing his arms about." His gesticulations were threatening.

A former head attendant at Malling Place denied the plaintiff's allegation that he was subjected to rigorous treatment when he was brought back to Malling Place on December 14, 1912. The plaintiff was not threatened with a padded cell.

Dr. Henry Fisher, of Sittingbourne, said he saw the plaintiff in an extremely excitable state haranguing the villagers at Newington on November 9, 1912, about magistrates, witness, and so forth, so he concluded the plaintiff was of unsound mind, and accordingly certified him as such.

Mr. Matthews: Must you not see by questioning whether the man's answers are rational and coherent?—My duty is to make observation.

Mr. Justice Lush: Is it your duty to put questions to the alleged lunatic?—Yes.

Mr. Matthews: What questions did you put to the plaintiff, and what answers did he make?—I cannot remember now any questions that I put.

The witness denied the suggestion that he had been brought there for the purpose of certifying Mr. Harnett, and that he was prepared to do so on any flimsy material. He went there with a perfectly open mind, and, in his opinion, the evidence was sufficient.

This witness was recalled at a later stage of the hearing, and admitted that his statement in his earlier evidence that if Mr. Harnett had said that he (the witness) had attended Mrs. Harnett he would have treated it as a delusion, was untrue—counsel having produced a receipt given by him in respect of medical attendance upon the plaintiff's wife. The witness, in explanation, said: "The question was thrown upon me suddenly on a mind blank on the subject. Naturally, I resented that question, because I knew very little of it."

Mr. Justice Lush: In my opinion your conduct in regard to this evidence you gave is very reprehensible.

Dr. T. Claye Shaw, who saw the plaintiff at Malling Place on November 19, 1912, said it struck him as being a case of toxic insanity brought on by blood-poisoning.

Dr. Ludford Cooper, who was called in by Dr. Penfold to see the plaintiff at Newington towards the end of October, 1912, said he had not the slightest doubt that the man was insane. On December 13, 1912, Mr. Harnett came into the witness's consulting room and prayed aloud on his knees. The witness went to the fireplace and the plaintiff followed him on his knees, still praying, but beyond the words: "Jesus Christ," he was quite incoherent, and the witness did not

know why the plaintiff wanted to consult him. The plaintiff, when he got up, began to talk about a plot and a conspiracy between Dr. Penfold and Mrs. Harnett, and the witness was aware that this was not true. The witness happened to be at Malling Place once when the plaintiff came up and shook him warmly by the hand, and asked him how to spell "parallelogram."

Dr. Alfred Irby Webster, of Rainham, near Chatham, said the plaintiff called upon him twice on December 13, 1912, and the first thing he said was: "Dr. Webster, you are a deeply religious man. You believe in the Lord Jesus Christ." The man was wild and excited in appearance and manner, and the witness formed a very decided opinion that he was of unsound mind. His belief was that the plaintiff wanted him to be his family medical adviser.

Mr. Oswald Dickinson, Secretary to the Commissioners in Lunacy at Victoria Street, in answer to questions by the judge, said a memorandum was kept of every visit to the offices.

Mr. Justice Lush: How comes it that there is no reference in the memorandum of the plaintiff's visit to the condition of the plaintiff?—We do not put down the mental condition of a patient.

Mr. Justice Lush: Not when you are sending to have him fetched because he is not fit to be at large?—No.

Mr. Justice Lush: There is not a trace in the memorandum of any justification for sending him back, except that he had escaped from his brother. Can you account for that?—No.

Mr. Justice Lush: I attach the very greatest possible importance to it.

Dr. E. S. Passmore, Medical Superintendent at the Croydon Mental Hospital, said he fetched the plaintiff from Malling Place in February, 1913, and during the return drive Mr. Harnett, explaining why he had been detained, said: "I was poisoned by tuberculin, and it went to my head."

Cross-examined, the witness said the delusions which he himself detected in the plaintiff were his idea of possessing supernatural power and his ideas of suspicion and persecution. He reported the plaintiff after admission to be suffering from "mental exaltation." He thought the plaintiff was "tormented by voices" from his general attitude, and the manner in which he looked round if one spoke to him. He believed it to be true that Mr. Harnett offered the Board of Control £30 to send a mental detective to his home to see that he had fair play. The plaintiff told him he had told Dr. Cooper that he (the plaintiff) had the "key" to everything, and witness regarded that as a delusion. The plaintiff was reported on October 25, 1914, to be harbouring vengeance against everyone who had had anything to do with putting him in the asylum, and the plaintiff once said to

witness: "I will do for them." Witness thought it meant that plaintiff would do personal injury.

Dr. Berncastle, assistant to Dr. Passmore, said the plaintiff told him he possessed a mission to save souls and claimed to possess supernatural powers. He considered the plaintiff insane, and even now, after hearing the plaintiff give evidence, he would not certify that he was of sound mind without a special personal examination of him.

Lord Sandhurst, a Visitor in Lunacy, who saw the plaintiff on July 9, 1913, May 18, 1917, March 20, 1920, and in June or July, 1921, said that when he saw him in 1913 plaintiff was in a state of mental exaltation, and attributed his illness to administration of toxin, dating his religious zeal from the time of his illness. The plaintiff was anxious to communicate his peace of mind to others, and to preach to Borstal inmates. The plaintiff thought his brother had been misled by Dr. Penfold, who had been actuated by annoyance at his (the plaintiff's) having consulted a quack instead of him. Also he thought Dr. Bond, in returning him to Malling Place, was covering up a scheme for bringing his persecutors to justice. The plaintiff was very voluble, excitable, and demonstrative. Lord Sandhurst added that his own object was to advise the Master in Lunacy on the appointment of a receiver, but he was apprehensive that the plaintiff's condition might lead him to do rash things if he had charge of his own affairs. In his opinion, it was in the plaintiff's own interests that he should remain where he was. In 1917 Mr. Harnett appeared more composed, and in 1920 still more composed, whilst by 1921, the witness, after a long conversation with him, could find nothing wrong with him.

Sir James Crichton-Browne, a Visitor in Lunacy for forty-five years, who visited the plaintiff at the Croydon home, after Lord Sandhurst's visit in 1913, said that after an interview of three-quarters of an hour he was able to satisfy himself without any doubt as to the state of the plaintiff's mind—"that he was of unsound mind and dangerous." The witness had not seen the plaintiff before or since. The plaintiff told him he had been injected with tuberculin by a quack, that he had a special mission to preach to boys and girls about their sexual relations. Witness asked him: "To girls?" and Mr. Harnett replied: "Yes, God has prepared me." Plaintiff also told him he had written a pamphlet entitled *Blood is Life*, for circulation among boys and girls, and, further, that a month after his marriage he had made a horrible discovery. The plaintiff then became greatly excited, beat his head with his hands, wrung his hands, and sobbed.

At his Lordship's request the plaintiff's statement about his wife was written down by the witness, his Lordship upon reading it observing: "I don't see any objection to this."

The witness added that he came to the conclusion that plaintiff suffered from a delusion about his wife. The plaintiff had said that when he made his discovery he had great difficulty in restraining himself. That was one of the reasons why he (Sir James) considered him to be dangerous, but without that statement witness would have considered Mr. Harnett insane. Mr. Harnett also disclosed a plot in which five or six persons were concerned, Dr. Adam being the central figure. The witness thought the excitement would subside, and that Mr. Harnett would obtain control over his delusions, but he did not think that he would lose the delusions altogether.

Cross-examined, Sir James said he regarded the man's statement that his illness was due to the injection as a delusion.

The plaintiff was then recalled, and, examined by Mr. S. Cope Morgan, gave his version of the various interviews with the witnesses called by the defence. It was because Dr. Penfold did not believe in God that he asked Dr. Webster whether he believed in God. Dr. Cooper called on him on October 31, 1912, when he was recovering from his delirium, and said to him: "Mr. Harnett, in my opinion you are perfectly sane. It is entirely due to the toxin and you need not be afraid that it will ever occur again." The plaintiff denied that when Dr. Cooper called at Malling Place to see another patient, he asked him to spell "parallelogram." What actually happened was that when he saw Dr. Cooper, Dr. Adam, and a third person seated in a room, he went up to Dr. Cooper and said: "Doctor, I want to thank you for the true report you gave me on October 31. Now I know you will speak the truth. Tell Dr. Adam here, when you saw me on October 31, was I mad or sane?" Dr. Cooper replied: "Perfectly sane." As to Dr. Cooper's statement that the witness followed him about on his knees on one occasion in Dr. Cooper's consulting room—"it was absolutely false." What actually happened was that he went down on his knees on a piece of furniture and told the doctor his domestic troubles, as he had later told Sir James Crichton-Browne.

Counsel then addressed the jury.

The Attorney-General submitted that Dr. Bond sent Mr. Harnett back to Malling Place so that Dr. Adam could see whether he was better or worse. If Mr. Harnett was sane the duty of Dr. Adam was to set him free. Nobody could suggest Dr. Bond was responsible. The only trespass in law which Dr. Bond might have committed was the keeping of the plaintiff in the room until the keepers arrived to take him back to Malling Place.

Mr. Neilson submitted that Dr. Adam had acted honestly, reasonably, and properly in an emergency, and that he had done no more than any properly minded person would have done in the circumstances.

Mr. Matthews said the case showed how a sane man could be kept for years in a lunatic asylum. On the jury rested the responsibility of rendering impossible in the future any repetition of the dreadful wrong done to Mr. Harnett.

Judge's Questions to the Jury.

Mr. Justice Lush, in his summing up, said that one sacred legal right that Mr. Harnett, as any other citizen, enjoyed was that of personal liberty, and if the defendants had interfered with it without just cause or excuse they would have to suffer the consequences. Dr. Bond had no more control over the plaintiff's personal rights than he (his lordship) had. Dr. Adam's case was different from that of Dr. Bond's, but still, if he had disregarded the plaintiff's rights and had acted in a way contrary to the law, he would have to take the consequences of his wrongful act. What more tragic thing could the jury conceive than that if the plaintiff was a sane person—he was admittedly a good business man—he should be taken off by keepers to an asylum and kept in asylums for nine long years, associated with maniacs and deprived of his liberty? If the plaintiff had not escaped, he (his lordship) did not know but that he might have been there now. It seemed strange, but it was the law that if a man hid himself for fourteen days, he was a free man. There was a question of law which, so far as he knew, had never arisen before—as to the rights and duties of those who were responsible for the charge of the insane when a patient was let out with a restriction in the order that he was liable to be taken back if his condition required it.

The judge's questions and the jury's answers were as follows :

1. Did Dr. Bond cause the plaintiff to be detained at the office until the attendants came for him?—Yes.

2. Did he cause him to be sent back for the purpose only of his being examined by Dr. Adam or for the purpose of his being detained at Malling Place?—Being detained at Malling Place.

3. Did Dr. Bond cause the plaintiff to be taken back?—Yes.

Did he and Dr. Adam agree, after consultation, that the plaintiff should be sent for and taken back?—No.

Was the taking back entirely the act of Dr. Adam?—No.

4. Was the plaintiff of unsound mind on December 14, 1912?—No.

Was he fit to be at large?—Yes.

Was he dangerous to himself or to others?—No.

5. Did Dr. Bond honestly believe that the plaintiff was of unsound mind, not fit to be at large, and dangerous to others?—No.

6. Did he believe that the plaintiff had escaped from his

brother's charge ; and, if so, was that his reason for having him sent back ?—Yes.

7. Did he take reasonable care to ascertain the true facts ?—No.

8. Did he honestly believe that Dr. Adam had retained the power of retaking the plaintiff back during his twenty-eight days' leave of absence ?—Yes.

9. Did Dr. Adam, when he received the telephone message and sent his car, honestly believe that the plaintiff, on December 14, 1912, was of unsound mind and unfit to be at large ?—Yes.

10. Did he honestly believe that it was in the plaintiff's interest that he should be taken back to Malling Place ?—Yes.

11. Did he take reasonable care in doing what he did ?—No.

12. Did he make it known to the plaintiff that he was liable to be taken if his mental condition required it ?—No.

13. Was the detention of the plaintiff at the Commissioners' office the act of Dr. Bond alone, or was it really the act of both defendants ?—Dr. Bond's.

The jury assessed the damages at £25,000—awarding £5,000 of this sum in respect of the original detention of the plaintiff at Dr. Bond's offices, and allocating the remainder in the proportion of seven-tenths against Dr. Bond, and three-tenths against Dr. Adam.

Mr. Justice Lush thereupon entered judgment against Dr. Bond for £5,000 and against Dr. Bond and Dr. Adam jointly for £20,000, refusing a stay unless £5,000 was paid to the plaintiff by Dr. Bond within a week, and £20,000 was paid into court, or security given, within three weeks, the usual undertaking to be given as to costs which followed the event.

Counsel asked whether security was necessary, as Dr. Bond was represented by the Crown, but his lordship replied that his judgment was not given against the Crown, but against Dr. Bond. If he had the assurance from the Government department that the money would be paid he would say no more.} He adjourned the application for a stay as against Dr. Bond for a week, and as against Dr. Adam for three weeks.

Counsel said he could give an undertaking that if an appeal was brought on behalf of Dr. Bond the conditions his lordship had imposed would be carried out.

Judgment.

Mr. Justice Lush, in delivering judgment, alluded first to the important question of remoteness of damage. Was it wrong in law for the jury to take into consideration as the damages which followed from the wrongful acts of the defendants the detention to which the

plaintiff was subjected during the whole of the period from December 14, 1912, till October 15, 1921, when he escaped from the mental home at Aylsham? It was truly said that where there was a *novus actus interveniens* the chain of causation was broken; and it was contended that there was a *novus actus interveniens* here and that the chain was broken either when Dr. Adam, on examining the patient after he returned to Malling Place, found that he was of unsound mind, or when the plaintiff was removed to Croydon in February, 1913, or on November 10, 1913, when there was a re-certification. It was immaterial that neither Dr. Bond nor Dr. Adam would anticipate that the plaintiff would be detained for so long a time. The test was not what the parties would have anticipated, but whether the damage was the direct consequence of the wrongful act. In his opinion, there was no *novus actus interveniens*, and the chain of causation was not broken. It was quite open to the jury to treat the long detention as a direct consequence of the wrongful acts of the defendants. The evidence showed how an unfavourable symptom might, and probably would, influence the medical superintendents and commissioners and visitors in considering whether the patient ought to be detained or discharged. To ascertain whether a person was suffering from mental derangement was a difficult question for doctors to diagnose. One of the obvious risks to which a patient in a lunatic asylum was exposed was that he might still be thought insane when, in fact, he was sane. The risk of such a consequence following was directly caused by his being placed in an asylum, and the peril was especially great in the plaintiff's case. Each fresh medical superintendent when he received the plaintiff into his home from the previous home would know the reports by the doctors at the previous places at which he had been detained, and would know their views and observations with regard to him, and would necessarily take into account in considering his mental condition what his previous history had been. He could not regard the decisions arrived at by the different doctors, commissioners, and visitors, at the various homes, and the decisions arrived at by the medical superintendents in the homes from time to time, as a fresh intervention which would break the chain of causation. What each doctor did was not to do some act which would injure the plaintiff, but to omit to discover that he had recovered. It was the failure to do something, not the doing of some independent act, that caused the plaintiff's further detention. In the view of his lordship, the re-certification on November 10, 1913, did not constitute an "intervention." What was done was mere machinery for the purpose of avoiding the necessity of having a new reception order drawn up. It was quite obvious that the jury treated the plaintiff as of sound mind during the whole period, and the evidence to that effect was

clear and convincing. The alleged delusions were not delusions at all, and the Attorney-General did not really dispute in his closing speech that, at all events, most of them were probably not delusions at all. It had been contended that there was no evidence to support the finding that Dr. Adam did not exercise reasonable care, and it had also been contended that that finding was not consistent with the finding that he honestly believed the plaintiff was insane, and that it was to his interest to be taken back.

Dr. Adam allowed the plaintiff to go out on December 12, 1912, with the consent of the justices, or they had given their licence on his recommendation, and it was said that, as that licence was subject to the power of revocation if the plaintiff's mental condition required it, that as Dr. Adam had the honest belief at the time when the plaintiff was sent back to Malling Place that he was not fit to be at large, and that as it was his interest to be taken back, Dr. Adam was entitled to revoke the licence, and that it was immaterial as he had the honest belief what care he had taken to ascertain if his belief was well founded. If he were to accede to that he would be laying down this principle—that a medical superintendent at an asylum owed no duty to his patients to take proper care, at all events towards a patient who had so far recovered that he had been allowed out. Of all others, the unfortunate and helpless persons who had been certified as insane required every care from those in authority. They were powerless to resist the actions of the officials who administered the Lunacy Law. Dr. Adam owed the plaintiff the duty to satisfy himself, before sending to have the plaintiff brought back, that he was insane, and if he chose to act on some other person's opinion he did so at his own risk, whoever that other person might be. He could not look at the matter from Dr. Adam's point of view only and forget that of the plaintiff. Dr. Adam owed the plaintiff a duty to take reasonable care, and honest belief afforded him no protection if he failed to take it. The jury were well warranted in coming to the conclusion that there was nothing to prevent Dr. Adam from going to see the plaintiff instead of agreeing that the plaintiff should be imprisoned at Dr. Bond's, and then put into the car and sent back. To say that it made no difference whether Dr. Adam examined the plaintiff before he sent for him, or whether he sent for him first and examined him afterwards, was a more serious misconception, as it was admitted by Dr. Adam, if any such evidence was necessary, that to bring the plaintiff back would be very detrimental to his mental condition, especially if, as was Dr. Adam's view, he had not absolutely and completely recovered at the time when he was allowed to leave Malling Place. Moreover, Dr. Adam could and ought to have ascertained from Dr. Bond before he sent his car what the plaintiff's symptoms were, and why Dr.

Bond thought he was not fit to be at large. The importance to the plaintiff, if he had ascertained the facts, was obvious. His lordship referred to the findings of the jury against Dr. Bond, and said if Dr. Adam had ascertained the true facts from Dr. Bond, he might never even have had to see the plaintiff at all. If he had gone up he could have cleared the matter up, and would, no doubt, have allowed the plaintiff to remain out of the asylum. Also, the jury were entitled to consider the strange indifference which Dr. Adam showed afterwards in never ascertaining from Dr. Bond what condition the plaintiff was in when Dr. Bond sent his telephone message. It evidenced his want of care throughout, and his lordship was of opinion that there was ample evidence to support the findings of the jury.

Finally, his lordship referred to the question of the onus of proof in cases where Section 330 of the Lunacy Act, 1890, applied, though he thought it immaterial in the view he took of the facts in that case. Section 330 protected the medical superintendent and others if they acted *bonâ fide* and with reasonable care, but the onus was upon them to prove that they were entitled to that protection. It was never intended that the burden of proving a negative should be upon the person who brought his action on the ground that the official had exceeded his jurisdiction, though, as a matter of fact, Dr. Adam had not exceeded his jurisdiction, but had failed to exercise the reasonable care he ought to have exercised to entitle himself to the protection given by Section 330.

[Dr. Adam's defence was conducted by the London and Counties Medical Protection Society, Ltd.].—*British Medical Journal*, March 8, 1924.

An appeal has been lodged. On March 5 the Attorney-General for Dr. Bond, and Mr. Carthew for Dr. Adam, applied that the hearing might be expedited. Lord Justice Bankes said that he thought it could be arranged for the case to be taken early in April.

REX v. DORA MARTHA SPARLING SADLER.

This case was tried at the Central Criminal Court, on January 16, before Mr. Justice Greer. The prisoner was 37 years of age, and had been employed for four years, as a childrens' nurse, in a family living at Kensington. Two children were under her care, Sonia aged 4 years, and Jean aged 9 months. Until the birth of the second child the mother had been in the habit of going daily to business. As a consequence, the care of the elder child had, to an unusual degree, devolved upon the prisoner, who became exceedingly fond of the child. After the birth of the second child the mother was more at home. The prisoner appears to have resented this, and there

were frequent disputes, culminating in a blow being given by the prisoner to her mistress. As a natural result, the prisoner was given notice to leave her situation. That same evening the prisoner's employers went out. On their return they found the nursery window closed and the door locked. Next morning the room was entered by the window. The child Sonia was lying dead upon the bed. The baby was lying unconscious, and died later. The prisoner was also in an unconscious state, and a gas-ring in the room was turned fully on. In the room was found a letter written by the prisoner, which said, "I am taking them both. I could not leave my Sonia to the creature she calls mother." The prisoner had also written to a friend in these words, "I am taking my darling Sonia with me. I know she would not be happy here without me. I did not want to take Jean, but I could not put her outside." The prisoner was removed to the Fulham Infirmary. After having been unconscious for six days, she recovered, and made a statement, in which she said that the children did not want her to go, so she said she would take them with her. She also stated that she remembered turning on the gas, and said that she wished she had been allowed to "finish" it.

Evidence was given to show that the prisoner was a good nurse, was passionately fond of the children, and thought she was the only person who could look after them. On one occasion the child Sonia had said that she liked the prisoner better than her mother. There was also evidence that the prisoner had attempted suicide at 17 years of age.

Dr. Parsons, medical superintendent of Fulham Infirmary, said that the prisoner, on recovering consciousness, appeared to be quite indifferent to her surroundings, and showed no remorse. He regarded her as below the average in intelligence, and was of opinion that she was incapable of realizing that her act was wrong. He would have certified her as insane. Dr. Morton, Governor and Medical Officer of Holloway Prison, agreed that she was below the average in intelligence, but had observed no indications of insanity.

The prosecution suggested that the motive for the crime was, in part, revenge for having been dismissed. None of the published evidence appears to support this suggestion, and the motive of jealousy would seem quite sufficient. Jealousy on the part of a nurse for the child's mother is quite common, and obviously arises from the maternal instinct. This jealousy would be accentuated in a case such as this, in which the nurse had practically sole charge of the child. The nurse may, indeed, build up the fantasy that she actually is the child's mother. The mentality of a murderer is always worthy of the closest investigation. And the necessity for such investigation

is, if possible, increased in a case such as this, in which a most desirable instinct results in so extreme a form of expression, and a woman kills the child to whom she is devotedly attached.

The judge, in his summing-up, is reported as saying that the present legal definition of insanity was "clear and understandable," and beyond that we got into "a region where tests were very difficult to apply in a court of justice." This latter statement is, no doubt, true. Our views on these most obscure cases are, at present, tentative and uncertain. And they will continue to be so, until we have intensively examined many more of these cases. We should then possess a mass of information which we could place at the disposal of society. It would be for society to decide what use it would make of this knowledge. The aversion which is naturally felt at a crime such as this should not be allowed to inhibit the desire to obtain information as to the mental factors which led up to it, but should, indeed, rather enhance that desire.

The woman was found guilty, and was sentenced to death. The Court of Criminal Appeal declined to interfere with the verdict. Ultimately the Secretary of State, in the exercise of his discretion, commuted the death sentence to one of penal servitude. So that opportunity for the study of this most interesting case will not be lacking. And we may hope to possess, at some future time, more detailed information as to the mentality of this woman.

REX v. GEORGE WILLIAM IGGULDEN.

This case was tried at the Central Criminal Court on December 6 and 7, before Mr. Justice Avory. It was of interest, inasmuch as the question of the accused's mentality was raised both on arraignment and during the trial.

The accused man was an artist, and 23 years of age. He was charged with the murder of Ethel Eliza Ireland (or Howard) on November 15. The woman had been divorced from her husband, and lived with her two children. The prisoner and the woman had intended to marry, and she had given notice of the marriage to the registrar. On November 15 the prisoner and she took a taxi-cab in the Strand, and he told the driver to go to the Brompton Road. On arrival there the prisoner told the driver to go to the nearest police-station. There the prisoner jumped out, and informed the police that there was a dead woman in the cab, whose throat he had cut with a razor. In a statement to the police, he said that he had met the woman through an advertisement. They were very fond of each other, and had intended to marry. In the cab she said she would be willing to die. He was kissing her, when he seemed to lose control,

took his razor from his pocket, and cut her throat. He at once realized the seriousness of what he had done, and told the driver to go to the police-station. A fortnight previously, when at her flat, she had suggested turning on the gas, so that they might both die.

On December 6 the preliminary objection that the prisoner was unfit to plead was raised, on his behalf, by counsel instructed for him. The usual questions when this point is raised are whether the prisoner is able (1) to understand the course of the proceedings at the trial, and the details of the evidence, (2) to give proper instructions for his defence, or, if undefended by counsel, to cross-examine the witnesses, and (3) to "challenge" a juror to whom he might object. The last of these questions does not appear to have been raised in this case. Dr. Norwood East, Senior Medical Officer of Brixton Prison, had the prisoner under observation since November 16, and regarded him as insane and unfit to plead. In Dr. East's view, the prisoner was able to follow the proceedings at the trial, but not to instruct counsel. The prisoner was suffering from delusions, but would not give any information about these, because he thought he might be found insane. The prisoner had also refused to discuss his delusions with his solicitor. The judge took the view that if it was admitted that the prisoner was able to follow the proceedings, and to understand what the witnesses said against him, it was for the jury to decide whether he was not also able to instruct counsel for his defence. The jury decided that the prisoner was fit to take his trial.

The trial of the issue proper took place on December 7. The facts of the case, as briefly stated above, were not disputed. The defence set up was that the prisoner was insane at the time of committing the act charged against him. Evidence as to the occurrence of insanity in other members of the prisoner's family was given. There was also evidence that prisoner had some "phobias," and had delusions that detectives were after him when such was not, in fact, the case. But the chief evidence of insanity was that given by Dr. East and Dr. Hyslop.

Dr. East was of opinion that the prisoner was insane. He considered that the prisoner knew that he was cutting the woman's throat (*i.e.*, in legal language, he knew the "nature and quality" of the act), but that he did not know that the act was wrong. The prisoner had asserted that he had thought it a proper thing to cut the woman's throat, that he was doing her a service in so doing, and that she was always asking him to do it.

Dr. Hyslop had examined the prisoner on two occasions, and had no hesitation in regarding him as insane. He agreed with Dr. East as to the prisoner's view of the rightness of his act. He considered the prisoner to have acted under the influence of an imperative idea.

He further held that the prisoner having given himself up to the police was evidence of insanity.

The judge's summing-up appears to have been entirely against the defence of insanity. He stated that the medical witnesses had formed their opinion entirely upon what the prisoner had said to them. He also pointed out that the prisoner had protested against being regarded as insane, and knew that he was being examined in order to discover whether he was insane or not, knowing that, if held to be insane, he would escape the full penalty of the law. He therefore described it as "childish" to suppose that the prisoner's statements could be relied upon. The newspaper report of the summing-up is very condensed, but it is not easy to follow the reasoning here.

The jury accepted the judge's view of the matter, and found the prisoner guilty. He was sentenced to death. After this had been done, the jury added a recommendation to mercy.

The judge is reported as saying that justice has to be administered according to law, and not according to the views of medical men. The jury, in a criminal trial, is sworn to give a true verdict "according to the evidence." It is no doubt true that during the progress of a trial, evidence, even non-medical evidence, might be forthcoming which would upset even the most eminent medical evidence which had, as in this case, been brought forward. But it is hard to see that any such rebutting evidence was forthcoming here. It is also, of course, true that a prisoner, whether sane or insane, may practise deception. But is the jury, even when directed by a judge, better able to decide upon that point than are medical witnesses, especially a witness who has had the prisoner under close observation for some weeks previous to the trial?

The ultimate result was that the Secretary of State, acting we may presume upon the result of an inquiry held under Sec. 2 (4) of the Criminal Lunatics Act, 1884, respited the sentence, with the view of sending the prisoner to Broadmoor Criminal Lunatic Asylum. This procedure is similar to that adopted in the case of Ronald True. And the entire absence of any popular clamour in the present instance indicates how large a difference the "sensational" nature of a case may make.

THE ATKINS REPORT.

[The following letter written by Dr. J. Warnock was rejected by the *Daily Mail*. An article of similar pungency found a place in the February number of the *Fortnightly Review*.]

SIR,—The article on "The Impulse to Kill" in your issue of to-day's date, attributed to an ex-asylum medical officer, should not be allowed to pass unnoticed. It would indeed be interesting

to learn in what text-book or in what asylum case-book he has found a case diagnosed as "homicidal mania." Such a term is not to be found in the classification adopted by the Board of Control. Such a label would be unscientific, as the tendency to kill occurs in many forms of insanity. I have known murders to have been committed by persons suffering from mania, melancholia, paranoia, general paralysis, pellagra, alcoholic insanity, and from other forms. In thirty-seven years' experience of many thousands of cases I have never met an example of insanity the symptoms of which were limited to a tendency to kill. Also, my experience of the prevalence of the tendency to kill has been very different to that of your correspondent. I have met several hundred instances of it. In some races homicidal attempts are far commoner among the insane than suicidal attempts, though in England the reverse is apparently true.

The assertion that each type of lunatic keeps on repeating the same kind of action is misleading, and makes me suspect that the writer still adheres to a belief in monomania—a term long ago discarded as untenable. The personality of the so-called monomaniacs are not people under the influence of one fixed idea or tendency. On the contrary their personality is warped and changed, and much of their conduct is affected by their delusions. Thus I have known a megalomaniac kill his neighbour. Lunatics commit murder from all sorts of motives, influenced by all sorts of delusions, hallucinations, emotional outbursts, and from religious exaltation or depression.

Although I have met and discussed the question with many medico-psychologists, I have never met one permeated by the idea that every criminal is insane. In the present state of our knowledge that statement is far too broad, and seems to be an echo from the days of Lombroso. But experience has shown that the more criminals are studied, the more it becomes evident that a certain proportion of them are not quite sound in mind, and that to punish them like ordinary people is barbarous—just as barbarous as we now think the murder by the law of so-called witches in the middle ages to be. Centuries hence our law as regards the insane will be called barbarous for not treating this class of the community more justly.

The final word as to insanity or otherwise of an accused person should be said by those who are expert in the observation and understanding of the insane, *i.e.*, the trained medico-psychologists. The present system of leaving the question to a jury is absurd, and contrary to what obtains in other cases where expert knowledge is freely used.

I am unaware that anyone has advanced the theory that when a person who has never shown any symptoms of insanity commits a brutal murder, he is the "automatic victim of a diseased mentality." On the contrary, if such a theory were advanced in any case, the indi-

vidual should be very carefully observed ; and if, in reality, it transpires that the man cannot control himself like a normal person the expert should so certify. But to suggest that the fact of his committing a brutal murder automatically justifies a plea of want of control is pure nonsense, and is a view held by no authority on mental diseases within my knowledge.

As to the influence of the ductless glands on human conduct, your correspondent must have had bad luck in never meeting and treating a case of myxœdema—a disease in which not only is the bodily health profoundly impaired, but the victim becomes insane from absence of functioning of a ductless gland—the thyroid—so that asylum detention was often necessary. That such a case is nowadays promptly cured mentally as well as physically by the administration of sheep's thyroid glands is well known to all medical men, and is clear proof of the extraordinary effects of that ductless gland on the mind. Also, he has never evidently met with a case of exophthalmic goitre accompanied by severe insanity, due to over-action of the thyroid gland, and curable by removal of half or all of the too active glands. The proof is tangible enough for the most sceptical. Medical literature abounds in examples of the action of the endocrine gland on the emotions and the mind generally.

No one with considerable experience in murder trials can be satisfied with the McNaughton Rules ; even the judges do not adhere closely to them. Long experience has taught me that the lunatics knowledge of the wrongfulness of the act should not be the criterion. The proper question to ask is : If this man had been unattacked of insanity, would he have committed the crime ? But the discussion of the fallacies contained in the McNaughton Rules would be too long for your space.

I would point out that no one proposed to turn the Court into a psychological clinic, any more than to turn it into an analytical laboratory in a poisoning case. Just as the physical poison is sent to a chemical expert in his laboratory, so in cases of suspected insanity (or " mental poisoning ") the man's mind should be examined by the appropriate expert in his laboratory, *i.e.*, by a psychological expert in his clinic. When this reform is effected, the present illogical custom of sentencing a man to be hung as sane and reprieving him afterwards as insane will cease. This system tends to bring justice into contempt, and to arouse suspicions of favouritism. Thus, the first step necessary is to withdraw the technical question of insanity from the jury, and put it in the hands of experts, as in the cases of poisoning, food adulteration, and other technical matters, leaving to the jury only the question of fact : Did the accused commit the alleged offence or not ?

Occasional Notes.

The Atkin Report.

WE published in our last number the text of the report of the Committee which sat last year under the chairmanship of Lord Justice Atkin to consider what changes, if any, might be desirable in the law relating to the criminal responsibility of persons of unsound mind. It is an adroit but unsatisfactory document. It concedes, albeit grudgingly, that the objections which medical men have for many years urged against the existing law are not altogether frivolous; but its proposal for mending the matter is about the least happy that could have been devised. It will not satisfy the doctors, because it does not answer the substantial point of their case. It has already provoked the hostility of lawyers, first, by purporting to be a concession to medical opinion, and secondly, by reason of the form in which that concession has been made.

It was no doubt unfortunate that in putting their views before the Atkin Committee the medical profession should have spoken with a divided voice. Two memoranda were submitted to the Committee, one by the Medico-Psychological Association, the other by the British Medical Association, and they were in sharp disagreement. But even if the two bodies had presented a united demand on the lines laid down in the Medico-Psychological Association's report, it is extremely doubtful if the result would have been substantially different. The matter in issue was a complaint against existing law. The plaintiffs were doctors, who were required to conduct their case "in person," and to prove it to the satisfaction of a tribunal composed exclusively of lawyers. The contest was a ludicrously unequal one. The inquiry resolved itself into a debate in which the lawyers, having proved their easy dialectic superiority to the doctors, unanimously awarded the victory to themselves! We do not, of course, suggest that Lord Justice Atkin and his colleagues acted otherwise than in good faith. They were scrupulously fair according to their lights, but they could not help being themselves. It is important to bear that fact in mind in estimating the value of their findings.

The gist of the Atkin Report is that the McNaughton formula is good as far as it goes, but "is not logically sufficient." Accordingly it is suggested that it should be amended to read in effect as follows: "Insanity is no answer to a criminal charge unless it can be shown that by reason of mental disease the accused either (a) did not know what he was doing, or (b) knowing what he was doing, did not know that it was wrong, or (c) *was in substance deprived of power to resist the impulse to commit the criminal act.*" The amendment (which we

have italicized), embodies substantially the recommendation of the British Medical Association. The Medico-Psychological Association took up a radically different standpoint. They proposed that the legal criteria of responsibility expressed by the rules in *McNaughton's* case should be abandoned, and that in every trial in which the prisoner's mental condition is in issue, the judge should direct the jury to answer the following questions :

- (a) Did the prisoner commit the act alleged ?
- (b) If he did, was he at the time insane ?
- (c) If he was insane, has it nevertheless been proved to the satisfaction of the jury that his crime was unrelated to his mental disorder ?

The first of these questions is strictly formal, for where the defence of insanity is put forward the fact that the prisoner committed the act is in the nature of the case not disputed. But the second and third questions are crucial. It may be, as the *Atkin* Committee have urged, that the phrasing of the third question is open to objection, but that is not material. The point is that the questions recognize the juristic essence of the problem, *vis.*, that insanity is one thing, and irresponsibility is another—an inference that may or may not be made from insanity. Some medical men maintain that once insanity is established, the inference of irresponsibility is for all practical purposes inevitable ; others take a more moderate view. But all are agreed that logically the two things are distinct. We may quote from the memorandum of the Medico-Psychological Association : “ Whatsoever may be the exact words used to describe the mental state of a person accused of crime, the law is only concerned to know whether it is a consideration that negatives the existence of *mens rea*. The legal principle involved creates a difficulty which is inherent in the problem of the criminal responsibility of the insane, and would have to be faced even if the *McNaughton* Rules were abrogated. For these Rules are not wrong in holding that irresponsibility is only an inference that may or may not be drawn from insanity ; where they err is in attempting to define precisely the conditions under which the inference is legitimate.” These are fairly explicit words. Yet we find the *Atkin* Report criticizing the Memorandum on the ground that it mistakenly assumes that the *McNaughton* Rules contain a definition of insanity, and that it fails to appreciate that “ the present law is that a person of unsound mind may be criminally responsible.” The legal position, so far from being ignored, is the basis on which the Memorandum rests.

Insanity and irresponsibility, then, are two different things. But the fact that they are logically distinct does not mean that they are not logically connected. It is no use making a neat dialectic cut, as

the Atkin Report does, and saying that the one is a question of medical science and the other a question of jurisprudence. That merely shirks the essential difficulty, which is to define the relation of the two things. The alienist who adheres to the Medico-Psychological Memorandum might make some such rejoinder to the lawyer as this: "If responsibility is purely a legal question, you do not need my assistance in answering it. To the plain question, 'Is this man insane?' I can give a plain answer, supported by intelligible reasons. But if you ask me whether he knew what he was doing, or that it was wrong, or whether he was in substance deprived of the power to control his actions, it is seldom that I can give a satisfactory answer. When I do my best you complain that I am vague and conjectural. Quite right, but I cannot help that if you will ask questions that have no scientific relevance."

We come then to this, that when medical men criticize the McNaughton Rules, it is not because they are blind to the distinction between insanity and irresponsibility. They do not, as the Atkin Report suggests, imagine that the judges of 1843 undertook to frame a definition of insanity. Any alienist who entertained such a notion would be a fit subject for the professional attention of his brethren. Doctors quite appreciate the McNaughton Rules for what they are, *viz.*, a statement, agreeable to the general principles of English criminal justice, of the conditions in which it appears *just* that an insane person should be subject to punishment. Their worth in law, it will hardly be denied, depends on their quality as justice, and any objection to them in that quality is a relevant one. Accordingly, the medical profession do not impugn the Rules as unscientific, but as unjust, being deductions from premises that are now known to be false.

We are anxious to make this point perfectly clear, for though it seems simple enough, it is extremely difficult to get the lawyers to see it. There always lurks at the back of the legal mind a notion that the McNaughton Rules are "rules of law." They are nothing of the sort. A rule of law (*e.g.*, the Rule in Shelley's case or the Rule in Clayton's case) is a species of legal fiction. It is an artificial presumption that the law makes for convenience, and will not permit to be contradicted. The McNaughton Rules are quite different. They are in no sense presumptions, nor were they ever intended to be artificial. They were regarded by those who framed them as inevitable deductions from certain propositions as to the human mind and human conduct that were regarded as axiomatic. The substance of these propositions was this: that the intellectual and cognitive faculties of man, though capable of being swayed by emotional considerations, are entirely distinct from emotion, that if his emotions

or appetites prompt him to an evil act, his intelligence will restrain him, either on moral or religious grounds or by reminding him of the penalties he may incur. This is the traditional account of the manner in which human beings behave, and upon it the McNaughton Rules are based. If it be true, obviously the only mental disorder that can justly excuse a man from punishment is a disorder of the intellectual and cognitive faculties. The reasoning of the judges in 1843 was perfectly correct. But what if it be not true? What if the premises from which the judges reasoned be questionable, if not demonstrably false? Clearly their conclusions must to the same extent be vicious—that is, unjust and consequently worthless as standards of responsibility. This is in fact what has happened. Modern psychology, though it speaks with many voices, is agreed upon two things—first, that the traditional psychology is wrong, and secondly, that the intellect, so far from being a self-sufficient entity, is rooted in the emotions and instincts as a plant is rooted in the soil. The traditional psychology, it may be admitted, works well enough for juristic purposes so far as the sane mind is concerned. The error of the McNaughton Rules consists in the assumption that it therefore affords a criterion for gauging the blameworthiness of the insane. One might as well say that, because the apparent motion of the sun may be taken as true for the purposes of navigation, it must therefore be regarded as true for all astronomical purposes whatsoever. Before we can claim that a psychology is true we must be in a position to say that it is true for minds generally, whether sound or unsound. If we try to judge the unsound mind by means of a few highly empirical generalizations from the sound mind, we are certain to go wrong, for in the nature of the case the conditions from which our generalizations derive their value are absent. We should be ashamed of elaborating in this fashion the simple proposition that true conclusions cannot be derived from false premises, were it not that the Atkin Committee are by no means of that opinion. After admitting that possibly the judges of 1843 took into consideration the current medical view as to the nature of insanity “if there was one,” the Report proceeds: “But it is certain they were not professing to define disease of the mind, but only what degree of disease negatived criminality: as much a question of law as the question at what age a child becomes criminally responsible, *though only to be decided after considering the nature of unsoundness of mind from the physiological (sic) side.*” Precisely. That, in a nutshell, is all that the medical profession have ever contended for. In view of that admission one would expect the Committee to recommend a radical re-statement of the legal position to accord with the change in the scientific view. Not at all. The McNaughton Rules are still held to embody valid

conclusions. Why? Because their logic is sound? Poor Daniel McNaughton's logic led him to shoot Mr. Drummond, whereby he raised a problem of great vexation to lawyers and doctors. By reason of mental disease his data were wrong, but his logic was irrefragable.

The Atkin Report, in fact, is a good example of the scholasticism that is the besetting sin of the legal mind. By scholasticism we mean an infinite belief in the virtue of correct reasoning, combined with a profound reluctance to examine first principles. The latter appears characteristically in the manner in which the Report deals with the legal doctrine of *mens rea*. First, the complaint is made that the Medico-Psychological Association "give no clue as to what they regard as the test of criminal responsibility." Note that the reference is to the test of criminal responsibility *in general*, not the test of the criminal responsibility of the insane. Let it be admitted that here the Atkin Committee have some ground for complaint. Had the Medico-Psychological Association included in their memorandum a discussion of the doctrine of *mens rea*, much misunderstanding might have been avoided. As it was they contented themselves with stating, by implication rather than by express words, that mere knowledge of the act ought not to be regarded as a universal and conclusive test of guilt. This suggestion was quite lost upon the Committee. They observe that the Medico-Psychological Association concede that the law is concerned with the mental condition of an accused person only in so far as it can be shown to negative *mens rea*. Why then, they ask, should there be any objection to the legal test of responsibility being directed to the condition of the accused person's intellectual and cognitive faculties?

The answer is that the maxim, "*Actus non facit reum nisi mens sit rea*," must not be treated as a rule of law hammered into rigidity by a long series of decisions, but must always be interpreted with regard to its ethical substance and intention. In primitive law the wrongfulness of an act consisted in its physical nature, which tainted the doer, however innocent his intention. On this basis brute beasts and even inanimate objects were adjudged guilty and "punished." A civilized morality, however, rejects such a notion, and insists that guilt does not reside in the act, but in the state of mind from which the act has proceeded. If the accused, owing to no fault of his, was unaware of the physical nature of the act, he is innocent—" *ignorantia facti excusat* "—but the burden of proving ignorance rests upon him. External compulsion also may exculpate, for, as in the case of ignorance, the mind does not accompany the act. This is the general doctrine of criminal responsibility. Its substantial justice will not be doubted. It is only when we seek to apply it to the lunatic that any

difficulty arises. We are faced by the questions, Can an unsound mind also be a guilty mind, and if so, in what circumstances? To the former question English law has always given an emphatic affirmative, and must always, in theory at least, continue to do so. As to the latter question, the answers have varied. Some of the older authorities held that the general doctrine of *mens rea* admitted of no exception. A lunatic must be condemned unless it appeared that his disorder amounted to *ignorantia facti*. The possibility of a morbid internal compulsion analogous to the external compulsion that might excuse a sane man was not so much as dreamed of. The judges who framed the M'Naughton Rules relaxed the strict doctrine by allowing—an odd notion for lawyers—that *ignorantia juris* would excuse if caused by mental disease. The Atkin Committee now propose to add the case where the accused committed the act under an impulse, which by reason of mental disease he was in substance deprived of the power to resist. The case of the criminal act that is at once insane and deliberate is passed over in silence, though it is the main ground of the medical criticism of the M'Naughton Rules.

We have thus three stages in the development of the law of the criminal responsibility of the insane. The first pushed a legal theory to a practical absurdity, which the second sought to cure by introducing a legal absurdity, while the third proposes to fill out the "logical insufficiency" of the others by introducing an element that has no discoverable relation to either. If, as the Atkin Committee suggest, the legal test of *mens rea* is necessarily directed to the condition of the intellectual and cognitive faculties, how can "irresistible impulse" be admitted? It is a rank anomaly. Theoretical objections, of course, would be of no moment if the suggested alteration promised to work well in practice, but there is very little hope of that. It would not cover any case that cannot be dealt with under that existing law, nor is it intended that it should, its purpose being merely to make good a "logical insufficiency" of the M'Naughton Rules. But, as between lawyers and medical men, it would open up new possibilities of dissension, and aggravate the mischief that it purports to cure. The mental expert, mindful of his present discomforts in the witness-box, may well pray to be delivered from the miseries of a cross-examination directed to the question whether the accused "was, by mental disease, in substance deprived of any power to resist" the impulse under which the act was committed.

It would save much confusion if it were clearly understood that "responsibility" is not an inherent attribute of mind that is either present or absent, but merely a judgment pronounced upon a set of facts in accordance with prevailing ethical standards. Of a culprit presumably sane we say that he ought to be punished because he

knew, or ought to have known, that he was doing wrong. No fault can be found with that rule. It is based on the practical knowledge possessed by every normal man of the working of his own mind. But in the case of the insane criminal we have no such knowledge. All we know is that he is a sick man, and that possibly, though not necessarily, his act was the result of his sickness. What, then, is the test whereby, the sickness notwithstanding, we can justly affirm that the act proceeded from a guilty mind? No test founded on the apparent knowledge or understanding possessed by the accused can be of the slightest use; for such a test assumes that the lunatic can regulate his behaviour in the same manner as the sane person, which is precisely what he cannot do; if he could, he would not be a lunatic. In his case a different basis of responsibility must be found if the term "responsibility" is to retain any ethical meaning.

Accordingly the Medico-Psychological Association propounded what they conceived to be a simple rule agreeable to common notions of justice. It may be stated in two propositions: (1) No man ought to be convicted in respect of an act done in consequence of mental disease. (2) If it appears that an accused person was at the time of the alleged crime suffering from mental disease, there is a presumption that his criminal act was induced by his mental disease, but this presumption may be rebutted. In other words, if a jury are satisfied that an accused person was insane when he did the act, they ought not to find him guilty unless good cause to the contrary be shown. The Atkin Committee object that this would nearly always throw an impossible burden of proof upon the prosecution, and that in consequence a certain number of persons who ought to be punished would escape. That may very well be, but it is a principle of our law that its forms are designed to secure the protection of the innocent, no less than the punishment of the guilty. In the opinion of those best qualified to judge, the act of an insane man is presumptively an insane act. If the contrary be shown, good and well; but if not, the accused, in accordance with the general rule of English justice, is entitled to the benefit of the doubt.

Whether the suggested disposition of the burden of proof on the question of responsibility be sound or not, it is essential that the jury should understand quite clearly that the issue they are trying involves three questions: (1) Did the prisoner commit the act alleged? (2) Was he insane at the time? (3) Was his insanity such as to entitle him to an acquittal? It is very rarely that the three questions are kept distinct. The general practice of judges and counsel is to telescope the second and third, and even to rule that medical evidence must be strictly directed to the latter. Medical men have for long complained of this, and the Atkin Committee have been constrained

to admit that the complaint is not groundless. "It may be," says the Report, "that some judges, anxious not to lose time, bring the witness very early to the decisive questions. We think that a wise discretion would allow all necessary expert evidence as to the general mental condition as a preliminary to evidence directly bearing on the ultimate legal issue raised by the plea." This rather naïvely phrased admission is all very well; but it is not enough that evidence as to the general mental condition should be allowed. The jury should also be directed that they must come to a conclusion on this point before they can answer the final question. As things are, the common form of direction is something like this: "The medical witnesses have told you that the prisoner is insane. He may be, but that is a medical question with which you have nothing to do. The question you have to answer is whether by reason of insanity he did not know, etc." The judge then goes on to criticize the medical evidence according to McNaughton standards. If, as usually happens, the medical evidence does not come up to these standards, the jury, being plain men unaccustomed to legal distinctions, get the impression that the judge is directing them that the medical evidence is frivolous and that the prisoner is *not really insane*. They are bemused by having two questions put to them in the guise of one. Nothing could be more repugnant either to logic or to fair dealing. If, as the Atkin Committee quite rightly say, proof of insanity is a condition precedent to the issue of responsibility, then let the jury be told so; let them squarely face the fact the effect of their verdict may be, "We find that the prisoner is insane, but is nevertheless responsible for his act."

The conclusion of the whole matter is that, if the practice of the law as to criminal responsibility were made strictly to conform to the theory, and if, accordingly, judges put the legal position explicitly before juries to the extent of directing separate answers to questions which the law regards as separate, no amendment or abrogation of the McNaughton Rules would be necessary. For where a jury had strong evidence of insanity, and, after due direction from the judge on that evidence, were satisfied that the prisoner was, in fact, an insane person, they would think, not twice, but many times, before returning an affirmative answer to the question of his responsibility. The reforms for which the Medico-Psychological Association have pleaded in vain would continue to be denied in theory, but they would be operative in practice. In the course of time practice would remould theory, and the McNaughton Rules would be relegated to a footnote in the text-books as one of the curiosities of English legal history.

Part II.—Reviews.

Mental Diseases. A Text-book of Psychiatry for Medical Students and Practitioners. By R. H. COLE, M.D.Lond., F.R.C.P. London: University of London Press, Ltd., 1924. 3rd edition. Pp. xiv + 356. Fifty-four illustrations and plates. Price 15s. 6d.

Our task regarding this book is a comparatively simple one, for when a publication reaches its third edition it has found an assured place in the literature on the subject, and without doubt is performing a useful function. The plan adopted by the author has been adhered to ever since the first edition appeared in 1913, and apart from revision of the text and a bringing up to date of the subject material, there has been little or no change in successive editions.

Dr. Cole's idea is to give the student a broad knowledge of psychiatry, especially clinically, rather than the propagation of any views personal to himself, although his comments are both illuminating and helpful: and thus he spreads his net far and wide, and as a useful compendium his book has few equals. The splendid illustrations are a valuable feature, and are very clearly reproduced and amply explained.

The present edition has been thoroughly revised, the clinical groupings being slightly modified and the morbid anatomy of general paralysis and serology entirely rewritten.

Although the author is well known as a teacher and consultant psychiatrist, yet perhaps his chief fame is in the sphere of medico-legal psychiatry. It is therefore with added interest we turn to his chapter on "The Legal Relations of Insanity and Mental Deficiency," and we are not disappointed. He handles this aspect of his subject with a clarity and judgment which makes this chapter one of the most valuable in the book.

We can again recommend this work to the attention of all those who are in practice associated with mental diseases, and especially to students who feel the need for a comprehensive summary of contemporary psychiatry.

J. R. LORD.

Mending Your Nerves. By FLORA KLINKMANN. London: The Religious Tract Society. Crown 8vo. Pages 136. Price 3s. 6d. net.

This is a thoroughly helpful little volume, which has been written for the laity by one who evidently has much understanding and a more than the usual amount of common sense.

Under a rather fanciful title the author gives much sound advice to people suffering from "nerves," and shows them how to direct their daily life so as to be able to carry on with their work and avoid becoming really ill. There is no attempt to give amateur medical advice, and the book is written mainly for those who, while they do not feel ill enough to consult a doctor, still find the struggle of life almost more than they can bear. It might well be used, however, to supplement purely medical advice, for it deals with many of the trivial everyday things of life which we of the medical profession

consider but little, and yet are such important factors in the cure of minor functional disorders of the nervous system.

The general tone of the text is healthy, cheerful and hopeful, and the religious note which is sounded from time to time does not detract from the usefulness and helpfulness of the book.

There is much good advice about suitable nourishing food, fresh air and exercise, and the chapter on "Cultivation of Sleep" is particularly well written. "Those Nerve Tonics" sounds a timely warning to people who fly to patent medicines and to alcohol when they feel weak and nervous; the ultimate depressing effect and the danger of such drugs is demonstrated, and people are advised to take drugs under medical supervision only. "Learning to Relax" is probably the best chapter, and here the busy working man or woman, and especially that most hard-working of all, the housewife who is trying to run a house and family on small means, will find much excellent counsel.

The author is not so sound when she attempts to explain "claustrophobia" and "agorophobia" and she would be well advised to omit in a future edition the chapter "Fears which will Disappear"; the subject is entirely beyond the scope of a book such as this, and a patient showing the symptoms described therein should seek special medical advice. This, however, is the only serious indiscretion in a book which is remarkable for its insight and for the sound practical advice which it has to offer.

I. EMSLIE HUTTON.

The Constitutional Factors in Dementia Præcox. By NOLAN D. C. LEWIS, M.D. Monograph Series No. 35: Nervous and Mental Disease Publishing Co., New York and Washington, 1923.

This research is based on the study of about 4,800 *post-mortem* records, of which over 500 were done by the author, and on the detailed study from all aspects of 22 cases.

Finding the changes in dementia paranoides differed from those noted in the hebephrenic and catatonic groups, the author has confined the present work to the two latter groups.

From the records quoted, the author found that 601 cases could with reasonable certainty be classified as dementia præcox. He divides these into various groups to differentiate the various factors, such as tuberculosis, which might influence the results. From this extensive review of cases he decides that there is a definite arrest of development in the cardiac and circulatory system, and an inability to respond to necessary strains. Although the heart was observed to be below normal in all psychoses, this was most marked in dementia præcox, and in one series of personally observed cases the heart was below the average in 75 *per cent.* Further, there was a lack of development in the great vessels, and in a high proportion of cases the aorta was thin-walled and diminished in lumen, and this also applied to the vessels supplying the brain. The cardiac aplasia was associated with lymphatic hyperplasia, and the author considers this, with a widening of lymph spaces and a consequent slowing of the current,

accounts for the liability to infection with intercurrent disease such as tuberculosis.

Of the series of 22 cases in which a close study was made of the endocrine glands and other organs, 21 were males. The ovaries of the single female case did not show marked changes, but further work might show the changes which have been noted in the ovaries by other workers. The glands examined were the pituitary, the adrenals, thyroid, pancreas and testes. In all of these changes were found, particularly in the testes, but also in the adrenals and thyroid, and to some extent in the pituitary.

The author agrees with the stages of regressive atrophy in the testes described by Sir F. Mott and his fellow workers; 16 of the 19 cases showed atrophy, and in 8 of the 18 examined, there was a complete absence of spermatozoa. He adduces evidence in favour of the view that the cyanosis commonly present is partly dependent on the insufficiency of the genital glands.

In the pituitary the changes noted accorded generally with the work of Sir F. Mott and Dr. Isabella Robertson; similar sclerosis were observed in the posterior lobe, and sclerosis with degeneration of the characteristic cells in the anterior lobe. The latter workers considered this condition of the anterior lobe with increase of nuclear elements to be characteristic of dementia præcox. Dr. Lewis lays stress on the patchy proliferation of the acinal cells as indicating aberrant attempts to fulfil function.

In the adrenals the author, while noting changes in the medulla, considers the cortical changes to be constant and characteristic, while Sir F. Mott and Dr. Emslie Hutton, who also noted changes in the cortex, consider that the sclerosis and hyperplasia of the medulla, together with pronounced nuclear changes, are characteristic of the disease.

Sclerosis and irregular new formation were noted in the thyroid gland, and the author is inclined to regard these as characteristic; but in view of the variable findings of different workers this is probably still a matter of doubt.

In discussing causation he postulates the probability of deficient "tissue-stuff" due to inherited constitutional defect, and he suggests both glandular- and psycho-therapy. He emphasizes the importance of studying cases in the earliest stages before permanent damage has occurred, and the necessity of not neglecting the mental side in order that a satisfactory protected environment may be provided and exciting factors avoided.

A. A. W. PETRIE.

L'Alcoolisme Cérébral. By R. BENON. Paris: Gaston Doin, 1924.
• Medium 8vo. Pp. vii + 373. Price 25 fr.

According to Dr. Benon, the prospect of a rationally and efficiently organized fight against alcoholism seems scarcely realizable in France. There is only one way, he says, of overcoming this scourge, and that is by intensive propaganda work. The propagandists should be young, enthusiastic, eager for the fight, and willing to go anywhere

and everywhere in order to educate and enlighten the people as to the disastrous effects of alcoholism, both to the individual and to the community. In this connection it is interesting to note that Prof. Dixon recently stated that the answer to the alcohol problem was not prohibition, but, in a large measure, education. A proper educational campaign, he added, required to be guided by science.

The first part of the book is devoted to the acute or subacute forms of cerebral alcoholism. These are, for the most part, curable, but may, on the other hand, become chronic. This group includes a variety of psychopathic states in which disorders of perception predominate—hallucinations, illusions, mental confusion, mistaken identity, disorientation, etc. The following varieties are described: (1) alcoholic hallucinosis, (2) delirium tremens, (3) mental confusion, (4) psychosis of Karsokoff, (5) ambulatory automatism, (6) delirious and maniacal drunkenness. In this review it will only be possible to refer to a few points.

Delirium tremens is distinguished from alcoholic hallucinosis, not so much by the degree of hallucinatory delirium as by the accompanying physical manifestations—fever, intense and prolonged muscular disorder, and weakness of the lower extremities. As regards the treatment of these cases, alcoholic hallucinosis is often best treated in a mental hospital on account of the agitation, the violent reactions, the tendency to escape, to commit suicide, etc. Balneotherapy combined with sedative drugs is recommended. "From the therapeutic point of view the mental hospital has this advantage over the general hospital, that the process of detoxication can be continued for several months." In the case of delirium tremens also it is essential to encourage elimination of the poison as well as to sustain and build up the strength. Mechanical restraint is fatal. Instead, daily baths should be instituted, short in duration but repeated.

Discussing the prognosis in Karsokoff's syndrome, the author says that the appearance of mental troubles in the course of alcoholic polyneuritis always makes the prognosis worse. This dual attack on the nervous system indicates not only a profound invasion of the organism, but also a constitutional predisposition on the part of the patient. In giving a prognosis, therefore, one must be very guarded: though some patients may recover completely, they form rather the exception.

That peculiar psychic state known as "alcoholic ambulatory automatism" has been noted by various authors. Dr. Benon describes two cases he has observed. In both of these fugues occurred. In one case the fugue lasted three days; in the other two separate fugues took place (one of six, the other of fourteen days' duration). During these "absences" the patients performed all kinds of complicated acts, and conducted themselves like normal people in the street as well as in the hotels at which they lodged. Nevertheless, there was complete amnesia for all that happened from the time they left their work until their return. The author is of opinion that these phenomena are probably due to alcoholic epilepsy.

The second part of the book is concerned with the chronic alcoholic

psychoses. These forms are incurable in consequence of the perversion of the mental faculties, the intellectual enfeeblement, or the psycho-neurotic troubles they engender. This group is subdivided as follows: (1) the mental and physical state of the chronic alcoholic, (2) alcoholic dementia, (3) alcoholic epilepsy, (4) chronic systematized delusions (secondary to alcoholic hallucinosis), (5) chronic delusions of jealousy.

With regard to the ætiology and pathogenesis of alcoholic epilepsy, Dr. Benon supports the hypothesis put forward by Magnan that the chronic alcoholic who becomes epileptic is one who habitually drinks liquors containing special essences or ingredients, particularly one who habitually drinks white wine, absinthe, etc. According to Magnan, a constitutional predisposition is not essential in these cases, but only in those alcoholics who do not indulge in these special ingredients. On the other hand, Joffroy maintains that no alcoholic develops epilepsy unless he has a constitutional predisposition.

In some cases of subacute alcoholic hallucinosis the hallucinations and delusions persist for months, and may eventually become systematized, thus giving rise to chronic systematized delusions. Sometimes hallucinations, at other times false interpretations, form the predominant feature of these cases.

Delusions of jealousy are considered apart from other delusional cases, a separate chapter being devoted to this subject. Ideas of jealousy in chronic alcoholics may be episodal or constant.

The author has included notes on eighty-five cases which he has had under his own personal observation. These help to elucidate those points in the text which may not be quite clear at first view.

This book will be found of much practical value to those engaged in psychiatric and medico-legal work, and it should also appeal to those interested in the alcohol problem. NORMAN R. PHILLIPS.

A Critical Examination of Psycho-Analysis. By A. WOHLGEMUTH, D.Sc.Lond. London: George Allen & Unwin, Ltd. 8vo. Pp. 246. Price 10s. 6d.

This book, published in 1923, is, as far as I know, the first well-informed and thorough criticism of the principles and practice of the new psychological creed, known by the name of psycho-analysis, that has appeared in this country. Although the word "psycho-analysis" is used by the founder of this cult to denote a special method of treating certain nervous and mental disorders, it means, literally, analysis of the mind or of mental phenomena, and is therefore a misleading title. For all physicians who study and treat mental disorder might rightly apply this term to their own methods of work, however widely such methods might differ between themselves or from those of the various new schools of psycho-analysis. I need hardly say that in this review I use the word "psycho-analysis" in its novel and sectarian sense alone, but for a remark by another critic of this book, who states somewhat ambiguously that he "is not

satisfied that in demolishing Freud's version of psycho-analysis Dr. Wohlgemuth has demolished psycho-analysis as well."

When we consider, on the one hand, the recent and rapid spread of psycho-analysis in Great Britain and the United States among legally qualified practitioners of medicine as well as the public at large (including many educationalists) since it was introduced to those countries within the present century by Dr. Ernest Jones, and, on the other hand, the extremely scanty criticism this teaching has hitherto received from alienist physicians or from well-accredited students and teachers of psychology, there seems at first sight to be some matter for surprise. But this soon vanishes when it is recognized that even the few seriously-intended adverse comments on the nature of the principles and practice of psycho-analysis have hitherto been ignored by its professors, or been met with the palpably absurd contention that nobody is competent to discuss psycho-analysis unless he has practised it and been psycho-analyzed himself. In the face of this concerted attitude of silence, or reluctance to tackle scientific criticism, on the part of psycho-analysts generally, it must be remembered that Freud himself and several of his disciples have gravely claimed for what they call the *discovery* of the unconscious mind, and for some of the deductions from this fundamental hypothesis, a scientific importance of equal weight with that of the discoveries of Copernicus and Darwin. In this context may be mentioned the following significant remarks made by Dr. Freud (which I quote from the book now under review, page 123) when reporting with abundant detail a case of "Analysis of the Phobia of a Five-year-old boy": "I know that not even by this analysis shall I be able to convince anybody who does not want to be convinced, and I continue the working out of this case for those readers who have been already convinced themselves of the objectivity of the unconscious pathogenic material, not without emphasizing the pleasant knowledge that the number of these latter is constantly increasing."

This notable silence of the leaders in the cult of psycho-analysis as regards any questioning of their basic assumptions may, I think, be fairly taken as intentional. They have failed to defend their position in such a manner as is always and justly required of scientists who propound a new discovery or even a plausible hypothesis. They exclude, indeed, either by implication or positively, all discussion about the relation between the nervous system and what they deem to be the "mind" or the "psyche." Nor has Dr. Wohlgemuth's book—the work of a well-known psychologist—published more than half a year ago, been seriously criticized as yet by any professed psycho-analyst.

The fact that up to the present time the doctrines and practice of psycho-analysis have met with so little serious criticism from psychologists or expert medical authorities is probably in great part due to the conviction of many who have given some attention to them that they are, on the face of them, unworthy of consideration by such as require some recognition of scientific method in the arguments of authors on whose works they may propose to comment at any length. Thus, but few thoughtful psychologists are induced to

read deeply or at all in the increasing mass of psycho-analytic literature which now is issued freely by both the medical and general press. And when would-be serious critics are told by psycho-analysts that they must believe before they inquire into the grounds of their belief, and practise on the assumption that necessary belief will follow, we can in some degree understand the almost unopposed progress made by these doctrines, especially since the Great War, among many of the junior members of the medical profession, as well as among considerable numbers of men, and probably more women, who are part of the reading public of the day, and prompt to seek out and seize upon any new thing.

Dr. Wohlgemuth's book justifies its title: it is truly critical, the work of a man well skilled to judge. Although in places his writing may appear to some as over-warm for scientific controversy, it would be a grave injustice to charge him with prejudice. He was first attracted, in 1910, to the study of psycho-analysis by reading some of Freud's notions concerning dreams. This led him to make a thorough examination of Freud's and others' works. He gives his reason for not having published this book until 1923 as follows: "That for psychologists in general psycho-analysis was stillborn; only when, owing to the propaganda of psycho-analysis in the Press, the general public began to take an interest in the subject, and especially when I saw that some medical men and, worse still, educationalists appeared to be taken in by the psycho-analytic confidence trick, did I decide to warn the unwary."

As I have already indicated my own conviction that the comments and conclusions set forth in this book are logically sound, and further, rest on verifiable premises, I do not intend to enlarge upon his arguments as a whole, or even to notice all his searching criticisms of the various contentions which are urged in support of the principles and practice of psycho-analysis. Some of these matters much stressed by psycho-analysts, and dealt with at length by Dr. Wohlgemuth, are "symbolism"; various "complexes"; and the insistence displayed by psycho-analysts in denying the inclusion of "suggestion" in their mode of practice.

It will be noticed that throughout this book the author furnishes the reader with an ample quantity of documentary evidence, taken *verbatim* from psycho-analytic literature, in support of his criticisms.

With regard to the hypothesis of the "unconscious mind" in relation to "psycho-analysis," I do not propose to dwell here on the opinions of the many psychologists who hold, with our author, that it is an unverifiable, unnecessary and misleading assumption. It is clear, if psycho-analysts, most of whom claim this hypothesis to be a new scientific "discovery," mean nothing else by "unconscious mind" than certain neurone-dispositions, the subject of which is unconscious of their occurrence, that thus one of the chief points disputed with them is eliminated. But as yet none of them, as far as I know, has made such an avowal of his meaning; and therefore, it is equally clear that the *onus probandi* of the existence of the "unconscious mind" rests with those who assert it; certainly not with those who doubt it, or regard it as an invention *ad hoc*, and who

cannot be expected to *disprove* it. It would appear indeed at present that the "unconscious mind" is assumed as an entity in order to establish the position of psycho-analysis, and especially of the teaching concerning the interpretation of dreams.

I will suppose now, for the sake of argument, that there is an "unconscious mind" as held by psycho-analysts, and proceed to consider some of Dr. Wohlgemuth's expositions, which plainly demonstrate the unscientific and illogical character of the Freudian method of probing into that "unconscious."

Freud asserts that the dream, as it is dreamt—"the manifest dream-content"—is but a "symbolic" representation of the real dream-thoughts "in the unconscious"—"the latent dream-thoughts." By means of a technique devised by him he further asserts that these latent dream-thoughts of the "unconscious" can be revealed; and the literature of "psycho-analysis" abounds with examples of such dream-analyses. The chief reason given for the correctness of the analysis is that it fits so well into the life of the dreamer, which cannot possibly, so it is asserted, be due to mere chance or coincidence.

Another way taken by the psycho-analysts to prove the existence of the "unconscious" and to demonstrate its unceasing influence on our thoughts and actions is to get the subject to write down any number of several figures that comes into his head, apparently by mere chance. If the number is then analyzed in a manner similar to that of dream-analysis, the psycho-analysts assert that it will be found that the number had been prompted by the "unconscious." The examples of this procedure occurring in the Freudian literature certainly appear marvellous to the uncritical, and the results may possibly be true. But before the scientifically trained investigator could assert this he would surely insist on applying a control experiment; and it is strikingly remarkable that none of the large number of psycho-analysts appears to have thought of this obvious procedure. Dr. Wohlgemuth has, however, come to their aid. He analyzed a dream he had never dreamt—it was Pharaoh's dream, recorded in the Book of Genesis—according to all the rules of the psycho-analytic art, and the result is as astonishing as it is amusing. He also analyzed certain numbers, and the results seem to be better even than Freud's. But then the author tells us with dramatic effect that he did not put down the figures himself, but that they are the very same figures which Freud had analyzed as quoted by him earlier in his book.

Chapter III, on "Dreams," is one of the most valuable among the ten which make up this volume, all of which indeed are important, and indicate the careful study the author has given to his subject and the fair way he has represented the position of those he criticizes. But this chapter must be read as a whole to be duly appreciated, as also Chapter VIII, "On Other Manifestations of the Unconscious." His strictures, here and there, on the way of reasoning followed by Freud and adopted by many of his disciples are both just and strongly significant. In his last chapter the author says of Freud's method: "He makes an assertion, defends it on the ground of its plausibility, and then on the next page he refers to this assertion as

a *fact*, or says, 'as I have shown,' etc., etc. For instance, he asserts that a dream is a wish-fulfilment. The objection that there are dreams which apparently are not so he meets with another assertion that such dreams are *distorted*, and that the manifest dream-content is something wholly different from the latent dream-content. This, for him, constitutes a proof, and he refers to it henceforth as the *fact* of dream-distortion. Most of Freud's proofs consist of this argument in a circle."

It appears from the whole content and plan of Dr. Wohlgemuth's book that he is challenging the claim of psycho-analysts that their system is based not only on scientific truth, but on a new scientific discovery of paramount importance. It is not necessary in this review to labour the argument that the notion of the "unconscious mind" is not new; it has only been revived by psycho-analysts, with a new application of it to a novel method of treatment of nervous disorder.

Dr. Wohlgemuth writes as a psychologist, not as a medical authority, and the nature of his book does not call for any consideration of a medical kind on the actual practice and results of psycho-analytic therapy. Apart from this, it seems to me that were any serious discussion on the practical side of the question deemed desirable, there is no ground on which satisfactory debate can take place. There is actually no published material available for any clear or definite issue to be arrived at; nor has anything like a demonstration ever been offered that psycho-analytic treatment is superior to other methods of attacking "mental" or "nervous disorder," "functional" or otherwise.

For this and other reasons the harm which I believe to be the outcome of much of the psycho-analytic practice of the present time cannot be definitely proved. But not until some such criticisms as are contained in this book, and in another by Dr. McBride, entitled *Psycho-Analysts Analyzed*, have been shown to be erroneous by the adducement of adequately established facts in the place of mere assumptions and fallacious inferences, can the doctrines of psycho-analysis establish their claim to a basis of scientific knowledge, or to be of any special value, or even harmless, in practice. That many practitioners of medicine are honest believers both in the theory and practice of this cult I do not doubt; but I believe that many others have been convinced of the truth and utility of this teaching with surprising suddenness, and without proper training or even inclination to scientific methods of thought, and have thus apparently yielded to the fascination of a definite, alluring and easily adaptable formula of faith and practice.

H. BRYAN DONKIN.

Social Workers and the Insane. An Address delivered before the Society of the Crown of Our Lord. By Lt.-Col. J. R. LORD, C.B.E., M.B.Edin., Joint Hon. Secretary of the National Council for Mental Hygiene. London: Adlard & Son & West Newman, Ltd., 1923. Pp. 26. Price 6d.

In this address Col. Lord discusses the difficult problem as to how far it is possible to bring the mental hospitals into vital contact with

the community as a whole. This problem is most difficult to solve in the county asylums, since these are usually situated in isolated positions, and their patients are drawn from a wide area. The borough mental hospitals, being situated in close proximity to the town from which their patients are sent, are much more closely identified with the life of the community. The members of the committee are personally known to the patients and their friends; local concert parties, choirs, cricket and football teams and so on are constantly visiting the hospital; and the clergy, medical attendants, and the secretaries of organizations with whom the patients may be connected pay visits at frequent intervals. The mental hospital is thus part of the town, and known to its inhabitants as much as any other hospital or infirmary.

What, therefore, is the solution of the problem of the isolation of the mental hospital and the insane, and the disabilities to both patients and staff which arise therefrom? Col. Lord feels that the way out of the difficulty is to bring the outside community to bear upon the daily life of the mental hospitals in the form of hospital visitors and social workers. He shows that such workers would be helpful in a number of ways; they would pay particular attention to friendless patients, act as a link between patients and their homes, gather reliable information as to the history and the home environment, supervise the after-care, and interest themselves in the social life of the hospital. The author does not write from a purely theoretical point of view, because his suggestion has actually been put into practice at Horton Mental Hospital, and the result has been sufficiently encouraging to render the hospital management keenly desirous of extending this new departure very considerably. We certainly think it might with advantage be adopted in all mental hospitals.

Quite apart from the special question as to the value of the social worker in connection with the mental hospital, any psychiatrist whose professional interests extend beyond the mental hospital—whether he is engaged as a school medical officer, as a physician to out-patients, or as medical adviser to mental deficiency committees—will find himself helpless unless he has the intelligent co-operation of the school teacher, the officials connected with homes, the clergy, health visitors and district nurses. It may be said, indeed, that trained social workers in the sphere of mental disorder are as much a necessity to the work of the psychiatrist as are professional nurses in the mental or general hospitals. In this connection the National Association for Mental Welfare has already done extremely useful work in training social workers to co-operate with medical men engaged in psychiatric work in and outside mental hospitals. What are, therefore, needed at the present time are more trained and expert social workers, and also more knowledge amongst the general public—especially those engaged in social problems, such as educationists, clergy and so on—of the function of the mental hospitals and the aims of mental hygiene generally. Lectures such as the one given by Col. Lord in which the aims, methods and needs of the mental hospitals are outlined are of the greatest value from the educational point of view, and his address merits the attention of

psychiatrists, social workers, and, indeed, all those who have a direct or indirect interest in the problems of mental disorder.

H. DEVINE.

The Porteous Maze Mental Tests. By H. HERD, M.A., M.B., D.P.H.
The Medical Officer, December 8, 1923.

IN this paper Dr. Herd describes the results obtained by the Porteous mazes in the estimation of the mentality of children. There is general agreement that the various modifications of the original Binet scale leave much to be desired. These scales are far too dependent upon verbal ability. And they fail to elicit very important qualities, e.g., the subject's initiative, his power of planning, his ability to overcome difficulties and to carry out a piece of work to its conclusion. Various "practical" tests have been devised for this purpose, and the mazes are among the best of these.

Dr. Herd points out that the "mental age" is of very little importance, as compared with the characteristics shown by the subject in dealing with the problems presented to him. We may have, among many other types, the subject who gets along until some difficulty occurs which reduces him to mental paralysis, the plodder who succeeds after many failures, the reckless subject who shows no foresight, and the lethargic subject who comes to a stop without any apparent cause.

There is, however, one serious drawback to the use of the mazes. A complete set of material, with which an indefinite number of cases can be tested on the Binet scale, can be obtained at a small expense. But a number of blank mazes are required for each subject. We wonder whether this difficulty could be overcome by having the outlines of the mazes printed on a surface from which pencil-marks can be erased with a damp cloth, thus enabling the same outline to be used continually.

M. HAMBLIN SMITH.

Insanity and the Criminal. By JOHN C. GOODWIN. London :
Hutchinson & Co., 1923. Pp. 320. Price 18s. net.

WHAT should be the reaction of society towards those who offend against its laws is a question which must, ultimately, be decided by society. No rational system of dealing with offenders can even be hoped for until there is far more general public recognition of the problems involved. So we are not indisposed to welcome a book on "criminal responsibility" by a non-medical author who has made a close study of the literature of his subject.

Mr. Goodwin accepts the Freudian theory, and he recognizes its revolutionary effect on our conceptions of the nature of crime and the correct treatment of the criminal. There are grave mistakes in his description of the psycho-analytic theory. For example, Freud is set down as the inventor of the doctrine of psychical determinism. The case was, actually, the exact reverse. Many scientists were prepared to accept Freud's views, because they were already determinists. It is not possible to be a Freudian without being a deter-

minist, although it may be possible to be a determinist without being a Freudian. But Mr. Goodwin's account of modern psychology should lead some of his readers to make a fuller study of this most essential subject. And with this object in view he gives a well-selected bibliography, in which the books most suited for a beginner are indicated.

The author recognizes that some consideration of the psychophysical relation is necessary for any real comprehension of the subject of mental abnormality. But his account of the various views which have been and are held on this matter is quite inadequate, and might well have been omitted. His views on heredity are open to grave objection. And there are various mistakes in the book, opium being instanced as a drug which dilates the pupil.

These would be most serious blemishes were the book intended as a scientific treatise. But it must not be judged by that standard. The aim of the book is to increase the popular interest which is now being taken in criminology; and we think that, in this direction, the book may prove useful. The author apprehends the weakness of the "general causation" theories of crime. He insists that the real subject for investigation is the man who has committed the crime, and not the crime itself. He realizes that we shall continue to work in the dark until we have made due arrangements for more intensive examination of the persons who are brought before our courts. He recognizes that many of these persons who are now "punished" are, in reality, proper subjects for "treatment," quoting with approval the remarks of Mr. E. G. Hemmerde, K.C., on this matter. And he sees the enormous importance which mental conflict has as a causative factor in the production of delinquency.

A review of the gradual development of our present criteria of "responsibility" is given, the leading cases being quoted. The author criticizes the McNaughton dicta adversely. He is in good company in so doing. And if he is unable to suggest anything better, there again his position is not unusual. We would, however, point out that there are serious objections to the proposal, which he appears to make, that every epileptic is to be regarded as "irresponsible," whether his offence is committed under the influence of his epilepsy or not.

With all its faults, the book is a diligent compilation. And we think that our readers will peruse it with some interest.

M. HAMBLIN SMITH.

The Psychology of Education. By D. KENNEDY-FRASER, M.A., B.Sc.
London: Methuen & Co., Ltd., 1923. Pp. viii + 202. 6s. 6d.
net.

We doubt whether Mr. Kennedy-Fraser has increased his reputation by the publication of this book. It purports to be an introduction to some of the recently developed phases of the psychology of education, in a form available to readers who have had no special training in these matters. How far these readers will be assisted in attaining a grasp of the subject may be gauged when we say that,

in discussing the Stanford revision of the original Binet mental tests, Mr. Kennedy-Fraser informs us that in each individual test "there are other factors than intelligence, such as memory, imagination, attention, or the like." He appears to regard intelligence as apart and distinct from memory. Whereas, in the ultimate analysis, imagination, judgment and reasoning power, all depend upon memory. The fact that persons of quite low intelligence may possess a high degree of some particular kind of memory, *e.g.*, that for the reproduction of a series of numerals, in no way vitiates this conclusion. Indeed the book seems to bow down far too much to the now popular idols of mental age and intelligence quotient. Man has an apparently ineradicable tendency to seek for short cuts, and so to attempt to evade the careful study of the individual. We were all commanded to worship the Binet scale, in its Stanford dress. That became too lengthy, and an abridged scale was indicated. This has been still further cut down, and now we are told that the vocabulary test is all that is wanted. It is but a step to the position of a well-known practitioner, now dead, who estimated every person's intelligence by the single test of his ability to state instantly the result of the multiplication of 9 and 7.

There are, however, some useful practical hints for teachers in the conduct of their classes, with the psychological reasons for the advice which he gives.

G. A. AUDEN.

The New Examiner. By P. B. BALLARD, Ph.D. London: Hodder & Stoughton, 1923. Pp. 270. Price 6s. net.

Dr. Ballard's writings are always stimulating and provocative of thought, for he possesses a pleasant vein of humour which gives to his presentation of facts a certain charm which holds the attention. His latest book is no exception, and is suggestive of reform in the methods of testing. This he does by means of a multiplicity of tests devised to test one point, in opposition to the customary method of testing by means of a few complex questions. The tests are thus less dependent upon the range of mental variability than is usually the case. After a critical examination of the advantages of his method, the author gives typical tests of attainments in arithmetic, history, geography, English and in silent reading. It is in the two latter subjects that Dr. Ballard's tests show the most marked differences from the tests usually applied by teachers. In both the aim is to test the power of comprehension, and in English, in addition, the capacity for construction. For this purpose the essay disappears altogether, and the test of the power to construct logical prose is given in the exercise of arranging a medley of words into satisfactory sentences. There is one drawback to this method, *viz.*, that none of the tests give an indication of the child's powers of expression. Similarly the history and geography tests hardly appeal sufficiently to the capacity for reasoning. An interesting feature of the book is the inclusion of a number of samples of script writing, arranged as a scale for marking and scoring the merit of a pupil's handwriting. To the teacher or examiner who is anxious to secure a measurement

of educational attainments with some approximation to exactitude, *The New Examiner* will be found both interesting and useful, while the pupil or candidate who needs encouragement will be able to appreciate that, in an examination conducted on Dr. Ballard's lines, he has had a fair chance of showing his capabilities.

G. A. AUDEN.

Part III.—Epitome of Current Literature.

1. Psycho-Pathology.

Phenomenology [Über Phänomenology]. (*Zeitschr. für die ges. Neur. und Psychiat.*, April, 1923.) Binschwanger, L.

This is an address given a conference in which the author tries to give the psychiatrists of his audience some idea of the nature and methods of a process of approaching knowledge which is different in kind from scientific and logical methods, and which he believes to be fruitful in the investigation and understanding of mental disease. He begins by examples from art, contrasting that which aims at representing the sensory qualities of the object with that which tries to give an immediate knowledge of its nature from within. Thus, when Franz Marc paints a blue horse, this emphasizes the fact that he is not showing any actual existing horse, but an abstraction of the generality of the being of horses. When Debussy represents in music a submerged cathedral, he produces something which calls up that in the minds of his hearers. Phenomenology passes from sensory apperception to an abstraction of the universal essence of the being of the thing perceived. The application of this method has been begun by Jaspers; instead of the descriptive classification of observed facts according to preconceived scientific theories, it strives to enter into the actual experiences described; instead of seeking types of pathological manifestations, it studies the mode of being of the patient, and tries to enter into the nature of his experiences as they exist for him, not judged by comparison with other known categories, and attempts to extract from a multitude of such experiences the reality which they constitute.

Some indication is given of what has already been investigated on these lines, and possible lines of research are suggested.

M. R. BARKAS.

Planes of Consciousness and Realms of Reality in Schizophrenia [Bewusstseinsebenen und Wirklichkeitsbereiche in der Schizophrenie]. (*Zeitschr. für die ges. Neur. und Psychiat.*, April, 1923.) Storch, A.

The experiences of schizophrenics have been made comprehensible to a large extent by the work of Bleuler, who has shown them to be parts of an autistic world, created out of the patients' temperamental needs; for the patient this world is a reality as much as the external world, which it may partly or wholly replace for him, but which he does to some extent distinguish from it. The aim of this work is to

investigate by phenomenological methods the nature of the patient's experiences in relation to the two worlds, and what is the difference to him in their content and their reality.

In the first place he asks what is the nature of the contact with external reality in the normal person, and what is that of the schizophrenic, which will be shown to resemble that found among primitive peoples. The relation of the patient to hallucinations and to a delusionally changed external world and to other people will be dealt with, and their differences to the patient's consciousness.

To the normal person the chief criterion of reality of external objects is their independence of him; they are there, whether he observes them or not, whereas imaginary things depend for their existence on his personality. The general characteristic of the schizophrenic's experience is that his mental and imaginary experiences have a substantial and concrete nature where the normal person would see only symbols and analogies. His thoughts have magical power and can produce real results; they have for him a substance, and he can manipulate them physically. Speech has preserved many expressions which for the normal are symbolical, but for the patient actual; we "look down" on despised people—for the patient the physical act of looking down on someone makes him despicable; we "collect our thoughts"—the patient makes gestures with similar meaning. His magical words and gestures express a mixture of wishes, tendencies and germs of concrete thoughts which he experiences in a peculiar conglomeration with a condensation found in the normal dream. This condensation is also characteristic for certain primitive modes of thought and for primitive levels of normal consciousness; Schilder has shown that our thoughts, before they come fully developed into clear consciousness, pass through a stage of symbol-like ideas; in the schizophrenic they do not get beyond this stage. This was also discussed by Bergson in his essay on immediate consciousness.

The relation of the schizophrenic ego to his world of hallucinations is next investigated; some patients feel these to be a representation of certain aspects of their own tendencies, distinguished by their vividness and actuality from mere imaginings, existing external to themselves, but differing from other external objects in their special relation to and dependence on the observer's ego—emanations from that ego.

The next problem is the relation of the patient to the object world changed by his delusional ideas. It appears to him in a new mode of existence, it has lost its identity as something separate from him, and is experienced as a sort of concrete interpenetration. We say that someone puts his whole soul into his work—the patient experiences this as a concrete loss of a part of himself; we speak of "drinking in something with our eyes"—for the patient an actual interchange of substance occurs; every activity in relation to something of emotional interest to him is an exchange of forces between the ego and the object. This recalls the emanation idea of primitive peoples—the idea of forces which pass through space from one object to another. In a similar way there is an interweaving of the patient's personality with that

of the persons about him ; the feeling of " being one with somebody " which we mean symbolically is felt as actuality by the patient ; this same sense of union is felt with the universe, and is not unlike the experiences of mystics ; he becomes God by this same process of interpenetration.

From all this it is evident that while the peculiar experiences have a concrete actuality for the patient, they are yet different from his experiences of the generally accepted reality of the external world ; and this difference lies in the special relation of dependence and interpenetration which the autistic world has to the ego of the patient. Some patients can slip from the one to the other, and are aware that the autistic world appears when there is a lessening of attention directed to the real environment ; one patient speaks of the " weary struggle to control his senses and prevent himself from yielding to the temptation of blissfully letting consciousness vanish away." It disappears when the ego raises itself to the plane of clear consciousness and attention to the surroundings ; its appearance depends on his own mental state. The appearances of this autistic world are as vivid and real as external objects, but their reality is different, in that it depends on the observer, and they occur only when the deeper layers of consciousness come to the surface. Attempts may be made to fit this world into external reality—such as ascribing sensations or pictures to some apparatus ; or the patient may ascribe the appearances to some special gift he thinks he has of spiritual vision.

Two extreme types may be considered for the interpenetration of the self and the world : on the one hand, the whole world may seem to be absorbed into the self ; on the other, the self absorbed into the world. The former corresponds to the " idealist " philosophy, regarding phenomena of the world as without material existence, and merely as projections of the perceiving self. For the patient in this stage all objects are merely qualities of himself made concrete, emanations from himself ; and this view is based, not on philosophical considerations, but on the nature of his immediate knowledge, and is akin to the mental processes of savages. The other extreme is that when the sense of being an individual is lost, the self is felt as a dependent part of the surroundings, which can penetrate into his being. In this stage he feels his thoughts are taken from him, and he is thus deprived of portions of himself ; he refuses to speak, since speech is a " giving away of himself " in the most literal sense, and he withdraws from all contact with the external world to protect himself from the sense of loss which is accompanied by tension and emotional discomfort. Impulsive actions may be a reaction to such tension. He feels safe only in the most complete severance from the world, in the extinction of all relationships with it.

M. R. BARKAS.

Pre-logical Thinking in Schizophrenia [*Prälogisches Denken in der Schizophrenie*]. (*Zeitschr. für die ges. Neur. und Psychiat.*, 87, 1923.) v. Domarus, E.

Certain modes of thought which appear among primitive races are

described and compared with the "normal" or scientific and logical thought processes; the latter have survived as the "fittest"—that is, as the most useful in dealing with external reality. Recognizable stages in development are termed "pre-archaic," "archaic-paralogical," and "paralogical-logical." In the pre-archaic thinking, which may be supposed to exist in such primitive forms as *Pithecanthropus*, and in schizophrenic stupor, there is a generally lowered intensity of images, whether sensory or motor, and of affectivity, and a lack of any attempt to establish relationships between these images, and an absence of any real thought process. In the archaic thinking of a pre-logical kind, found among primitive savage races, the vividness of the images is greater than among more highly developed races, and the affect produced in the observer is projected and believed to be an inherent attribute of the object, which thus acquires a "demonic" character; all things which arouse a similar emotion are thought of as being actually the same. In dementia præcox there is a similar loss of objectivity; hallucinations and reality are imperfectly distinguished, and every happening has a meaning and effect on the observer; the idea of an action produces the action directly, instead of offering a possibility of action, and this is interpreted as a compulsion from without. The paralogical thinking is a stage beyond this; here identification of objects is based on similarities, differences being neglected. It follows the "law of participation" described by Levy-Brühl—all things with the same qualities are the same: "certain Indians run fast," "stags run fast," *therefore*, in this mode of thought, "some Indians are stags." This form of thought again is common among cases of dementia præcox. It is contrasted with logical thinking, in which a conclusion is based on identities tested by objective reality, and is a logical deduction from the premises.

The author then considers the bearing of this view on the recent researches into the inheritance of the disposition to dementia præcox. Just as with other developmental stages, the latest and highest stage tends to predominate, and in so doing, to inhibit the tendencies to more primitive stages, which may yet co-exist with it. He suggests that a "disposition-quotient" might be established corresponding to the quantitative distribution of such tendencies; the disposition to logical thinking may be a Mendelian dominant, that to more archaic forms a recessive. Schizophrenia would thus become an atavism, manifesting itself either when the inhibiting logical thought disposition was abolished by external causes, or through the cumulative inheritance of recessive characters.

M. R. BARKAS.

Schizophrenic Signs in the Healthy Child [*Schizophrene Zeichen beim gesunden Kind*]. (*Zeitschr. für die ges. Neur. und Psychiat.*, September, 1923.) Wildermuth, Hans.

Many workers, especially Bleuler, have pointed out how the double orientation, the mixture of the real and the delusional worlds, which is characteristic of schizophrenia, resembles the experiences of normal people in dreams. Mayer-Grosz has called attention to the similarity in the behaviour of the schizophrenic to that of the child at

play—a behaviour in which the child lives in a world of its own, but is capable at any moment of exchanging it for reality ; he keeps them apart, however, and regards as spoil-sport anyone who tries to mix them.

The similarity is even more far-reaching than this author has shown. The difference between the child and the patient is mainly that the former can always return to reality, and that after puberty he ceases to be capable of living in the autistic world with the former completeness. As the child grows older he comes to require more and more reality to make his game of pretence satisfactory.

Not only does the schizophrenic's conduct strike the observer as resembling play, but he himself feels it subjectively to have a similar quality. He says people are making a game of him, it seems as if he were taking part in some play that is going on, or he plays a part without completely believing himself to be the imagined person he represents ; or the hallucinations give him the impression that some sort of moving picture or theatre is going on.

Many other childish manifestations resemble those of schizophrenics : children's jokes, tricks, and plays on words have a similar autistic character, with no apparent meaning in relation to actualities, and this changes at puberty. Children, like the patients, love to make up a sort of neoplastic language of their own, having meanings known only to themselves or their immediate circle. Perseveration and stereotypy in speech and action are often seen in children. Their musical performances show the same mechanical rendering, and the same preference for simple melodies and rhythms as are found among schizophrenics.

A possible explanation of this resemblance may be found in W. Stern's work on the consciousness of self in children ; the child lives far more in his unconscious or subconscious self than the adult, and has only partially discovered himself as a personality—has not become a problem to himself. Possibly this may be due to the incomplete development of some of the ductless glands, especially the sexual glands ; many workers think that the sexual life plays a much smaller part among schizophrenics than in normal people, and Fauser has shown that the serum of schizophrenics contains lysins for sexual gland tissue. The imperfectly developed organism fails when it has to face the tasks of adult life, and thus mental traumata may determine the onset of symptoms. M. R. BARKAS.

2. Clinical Psychiatry.

A Review of Service Patients in a Mental Hospital. (Amer. Journ. of Psych., July, 1923.) Henderson, D. K., and Gillespie, R. D.

This paper analyses 113 "service" cases who have remained in the Glasgow Royal Mental Hospital, Gartnavel, after the war, 67 of whom were in the hospital at the time of writing. Extensive data are given, including a survey of literature, statistics and typical case-histories. The paper is too full to be adequately condensed in an

epitome. The purpose of the study is to examine more particularly the ætiology, symptomatology and prognosis of the cases.

Existing literature on war psychoses deals mainly with the early stages, and data concerning the more chronic types is scanty. The divergence, confusion and indefiniteness in scientific terminology make most of the literature of little use for purposes of comparison. The authors record a plea for a uniform system of diagnostic classification and themselves adopt the American system. The British army classification they find to be very unsatisfactory. They hold in particular that the term "confusional insanity" does not represent a distinct entity but includes various different reaction types, and its adoption has led to errors, such as the overlooking of a transitory dementia præcox type of reaction which is acute and recoverable. The statement that paranoid conditions predominated in war psychoses they also question on the ground that cases elsewhere classed, without particularization, as dementia præcox have been included, and that when paranoid dementia præcox is considered, the proportion of paranoid conditions among service and civilian patients is approximately the same. They agree with most authorities in emphasizing the inefficiency of the mental examination of recruits, and the uselessness and positive danger of passing mental defectives and obviously potential psychopaths into the army, as well as of returning patients to duty after a mental breakdown.

An interesting comparison is made between the present study and a previous survey by Henderson in 1918 of 200 cases of psychosis occurring in home troops. The recovery-rate was, naturally, greater in the earlier series. Dementia præcox cases constitute with mental defectives by far the greater proportion of patients still under care, while alcohol was found to play a greater part in the acute than in the chronic psychoses. Of twenty-four cases of manic-depressive type in the 1918 series, only three gave a history of a previous attack.

The ætiological factors are divided into those existing before the war and those associated with service. Of the former, insane heredity, psychopathic personality traits, previous mental illness, mental or moral deficiency and excessive alcoholism accounted for 99 *per cent.* of the cases in the present series in which full data was available. These factors, however, were often combined with physical inferiority or with evidence of ductless gland anomalies, such as abnormalities in size and consistence of testes, distribution or texture of hair, etc. This is of interest in view of Adler's theories on organ inferiority, and of recent pathological work.

The ætiological factors associated with the war included service, traumata and infection. The average length of service of those who served only at home was ten months, and of those who also served abroad 2·2 years. Only 8 *per cent.* showed no predisposing or exciting factor other than service. A comparison of toxic-infective factors with the resulting psychoses shows that varied toxic-infective factors yield a comparatively small number of disease pictures, and those mostly well-defined psychoses.

The authors find that no new type of mental disturbance has been produced by the war, but that certain psychoses (*viz.*, dementia

præcox), which in civil life are usually chronically progressive, appeared in an acute, recoverable form. The authors reach the conclusion that the majority of cases under consideration would have entered a mental hospital apart from war strain; that none of those still under care are likely to regain normal mental health, and that nearly all will require permanent institutional care.

MARJORIE E. FRANKLIN.

Psycho-analysis and Vocational Guidance. (*Arch. of Occup. Ther.*, August, 1923.) White, W. A.

The author, after paying a tribute to the increased understanding of mental problems which psycho-analysis has brought to psychiatry, outlines some of the principles which bear upon vocational choice.

Psycho-analysis has replaced sensation as the unit of psychic life by the *wish*, which gets its driving force from the affective rather than intellectual side of the organism, and is expressed by motor rather than perceptive activities. A satisfactory vocation must be in line with an individual's wishes, but difficulty results from conflict between the ego or self-preservative and the sex or race-preservative instincts. Conflict and not hard work produces neurasthenia, and happiness and success depend upon the proportion of the personality satisfied. The sexual instincts may be sublimated and directed to socially higher ends, but the new aim must be genetically related to that abandoned. The writings of Brill and Stekel from the sexual aspect and of Adler from the point of view of the will-to-power and sense of inferiority are discussed, and Freud quoted. An individual is often impelled towards his career by a feeling of compulsion, dependent on a previous emotional and instinctive disequilibrium. This is particularly true in the case of the great men and women of history. Demosthenes, the stutterer, who became the greatest orator of Greece, is an example of the influence of physical inferiority. On a more commonplace level, as showing the force of the affective drive, was the patient who had a sense of sinfulness and a compulsion towards purification expressed at one time in attempted suicide by swallowing lysol, and at another by following the occupation of selling laundry soap.

Freud states that "the permanent distinguishing traits of a person are either unchanged continuations of the original impulses, sublimations of the same, or reactions formed against them." Stekel's classification of the mechanism of vocational choice is followed with modifications. The author strongly emphasizes, however, that more than one group is involved in most selections—a choice, for example, may be influenced both by sado-masochistic tendencies and the family situation—while the same calling may be chosen by different persons for different reasons.

The first group comprises *identification with the parent of the same sex*, which may be direct, where the same career is followed; indirect as regards choice, where the relation is less obvious, and perhaps expresses a further stage in sublimation and a desire to outdo the parent (as when the son of a butcher becomes an anatomist); or indirect as regards the parent, where a parent surrogate (such as a

teacher) is followed. The second group, where the hate component of the ambivalent relationship is dominant, shows the influence of *differentiation from the parent* in the choice of a contrasting career. A third group expresses attempts at *sublimation* of instinctive tendencies. For example, the sado-masochistic tendencies in the butcher, surgeon, prize-fighter, wrestler (in which muscle erotism also finds expression), the waiter, valet, anti-vivisection propagandist, and in many indirect forms combining or contrasting humility and aggressiveness; exhibitionism in the actor, the soldier in his splendid uniform, the athlete (and by identification, his audience), etc. Curiosity, originally sexual, may determine the vocation of the scientist or the photographer. The anal-erotic character (closely associated also with sadism and hate) tends, according to Freud, to develop orderliness, parsimony and obstinacy, and may find satisfaction in the occupations of book-keeper, librarian, financier, collector, while its opposite form may be expressed as generosity, or in the perversion of defiling statuary, etc., or interest in painting, cooking, building, sculpture, engineering, etc. The fourth group comprises occupations chosen as *protection against unconscious tendencies*, which not infrequently underlies the adoption of a religious or legal calling. In the fifth group the occupation gives a more or less direct *expression of unconscious sexual tendencies*: for example, homosexuality, partially expressed in the occupations of masseurs, bathing attendants, teachers, etc.; anal erotism in some street-cleaners (where necessity has not been the sole factor in choice), a chemist occupied in analyzing urine and fæces; fetichism (hand, foot, hair, etc.) in the career of glover, shoemaker, artist, rhinologist, etc.

These classifications are admitted to be incomplete and more complicated problems are touched upon. The author emphasizes that the choice of a career must be left to the individual. After removing distortions by psycho-analysis it is unwise and unnecessary to offer advice or suggestions. With regard to vocational tests, though the method differs widely from psycho-analysis, the author suggests the possibility that perceptual acuity may be correlated with instinctive tendencies. Mental levels are also important, but at each level different affective needs can be satisfied.

MARJORIE E. FRANKLIN.

The Difficult and Delinquent Child. (*Psyche*, April, 1923.) Gordon, R. G.

The problem is many-sided, and demands co-operation between educationalists and psychologists. The author describes a case, to illustrate the difficulty of determining the ætiological factors, in which the illegitimate daughter of a frivolous, pleasure-loving mother was adopted by another woman, who brought her up in an environment of austere simplicity, and later sent her to a boarding-school, where restraints were fewer. Here she evinced a pronounced love of personal adornment, to indulge which she eventually pilfered money. Heredity and early repressions may both have been causal factors here, and Dr. Gordon inquires how far the delinquencies might have

been prevented by different upbringing, or by mental exploration, such as psycho-analysis, and what happens to such cases when nothing is done for them.

Dr. Gordon commends work done in America and, in England, by Burt and Potts, and at the Tavistock Clinic, but in order to estimate the environmental factor adequately more observations are needed of cases coming from prosperous families.

Psychopathic and retarded children both contribute to the ranks of delinquency. The former show various degrees of lack of balance and the symptoms may be manifest at different ages. The author is inclined to give a good prognosis, in many cases, where the abnormality first appears about puberty. One type is characterized by absorption in phantasy, as in the case of a child who wandered from home to play with the fairies. Another and very intractable group comprises cases with uncontrollable impulses. Mental exploration gives the best hope in these difficult cases, which include many of the so-called moral imbeciles, in whom Dr. Gordon draws attention to the frequent deficiency in the power of giving and inspiring affection, and in gregarious instinct. He does not support the theory of a special centre for moral functions, and considers the inadequacy to be in the processes of higher integration.

The second main group of difficult children comprise those who are intellectually retarded. Although usually above the feeble-minded level, they suffer at an ordinary school from feelings of inferiority, which lead, where there is little self-assertion, to sullenness. Where the will-to-power is strong they compensate by various kinds of anti-social behaviour with the object of gaining an ascendancy over their fellows. Removal to a more suitable environment and increasing self-respect often restores these children to normal behaviour and improves them intellectually also. Untreated, they are liable to develop neurosis, drug habits or criminality.

Thorough physical examination is important in investigating children of abnormal behaviour, and, in particular, deafness, glandular disturbance and congenital syphilis demand attention. Intelligence tests give useful information, and in estimating the reaction of the individual to life association tests are valuable. Finally Dr. Gordon advocates the establishment of more clinics, and emphasizes the importance of their *personnel*.

MARJORIE E. FRANKLIN.

- (1) *The Interest of Research on the Cutaneous Vaso-motor Reactions in the Study of the Sympathetic Nervous System in Neuro-psychiatric Affections* [Intérêt de la recherche des réactions vaso-motrices neuro-psychiatriques]. (*L'Encéphale*, July-August, 1923.) Juster, E.
- (2) *The Linguo-Maxillary Reflex* [Le réflexe linguo-maxillaire]. (*Ibid.*, July-August, 1913.) Cardot, Henri, Cherbuliez, André, et Laugier, Henri.
- (3) *Observations on the Variations in Arterial Pressure during the Oculo-cardiac reflex* [Sur les variations de la pression artérielle au cours du réflexe oculo-cardiaque]. (*Ibid.*, July-August, 1923.) Schiff, Paul, et Wertheimer, Suzanne.

- (1) The vaso-motor nerves may be considered as belonging in a

general way to the great sympathetic system; observation then of the cutaneous vaso-motor nerves is equivalent to examination of the sympathetic system of the region concerned. In this study the aim has been to use simple practical tests suitable for clinical work, and these have been based on that classical paper of Vulpian's written in 1874, which is quoted: "It would be very interesting to study minutely in diseases, specially in all those which are accompanied by disturbances of the nervous system, the variations of the influence of mechanical excitation on the cutaneous vessels; because these variations certainly coincide with functional modifications of the vaso-motor system."

The clinical methods are given *seriatim* together with the observations made.

(a) *Line made with the pointed extremity of a pin*: It is only necessary to trace this very lightly, and a fine white line is obtained, which later reddens and becomes surrounded by a halo more or less large and more or less coloured. This line may become raised or even urticarious or the skin may show excoriation. The character and duration of the different phases should be noted.

(b) *Line made with the head of a pin*: This is broader, and passes through the same phases as the last, but the halo is often more pronounced, and the line may become more urticarious. A more or less extensive pilo-motor reflex may be produced.

(c) *Line made by stroking gently with the finger or a soft object*: It is by this method that the so-called suprarenal white line is studied. The rapidity of the appearance and the duration of this "white line" must be carefully observed, for in this way interesting information is obtained on the vaso-motor activity of the skin and accordingly of the sympathetic system.

(d) *Line made by firmly stroking the skin with the extremity of the index finger*: The skin becomes at first white, and goose-flesh appears in the region supplied with pilo-motor fibres. Later vaso-dilatation takes place. In certain pathological cases the vaso-dilatation may even pass beyond the stimulated zone and show an erythematous character.

(e) *Reactions obtained by methodical scratching*: Repeated light scratching with the nail of the index finger without using any wrist force produces ordinarily redness, then purpura, then a cutaneous hæmorrhage. The duration and the rapidity of the production of these different phenomena, in particular the redness and purpura, must be noted.

(f) *Intra-dermic reactions*: Injections of adrenalin and pilocarpine may be given into the thickness of the skin, and thus observations may be made on the state of the nerves which supply the unstriated muscles which the skin contains; thus information on the state of the sympathetic nerve system of the region scanned is obtained.

1 min. of a solution of adrenalin—1 in 1,000—is used, and normally gave the following reaction after a quarter of an hour: in the centre a white anæmic zone the size of a five-franc piece and at the periphery a more or less red halo (half to many centimetres). After an hour the reaction begins to diminish and disappears in one to one and a

half hours. Pilocarpine gives a somewhat analogous reaction. Atropine and eserine have also been used, and the author proposes to carry out future researches with solanine.

(g) *Lastly, the action produced by passing a test-tube of cold or hot water over the skin:* The friction of the skin by cotton-wool soaked in ether may give in addition to goose-flesh a more or less marked erythema. Hallion's and Laignel-Lavastines' "white spot" and the "white line" of Tinel also require to be studied intensively.

These methods have given valuable information in certain neuro-dermatological affections, such as alopecia and leucoderma, which we have shown to be endocrine-sympathetic in origin. In all diseases which may injure the local sympathetic system (neuralgias, neuritis, monoplegia, dermatitis) these methods of examination should be carried out. In these cases examination must be made by comparison with neighbouring healthy regions, and, above all, with the symmetrical normal region.

Research of the vaso-motor cutaneous reactions gives information as to the general tone of the sympathetic system. The author has observed during several months patients suffering from alopecia, in which the sympathetic system was greatly affected (strokes with a pin causing lines which were persistently urticarious for hours; and intense vaso-dilatation and erythema caused by the passage of the finger over the chest); he has remarked that as the patient improved and the endocrine disturbance disappeared, the vaso-motor reaction became normal.

These skin reactions ought to be linked up and compared with the other tests of the sympathetic system, such as the oculo-cardiac, solar and naso-facial reflexes.

(2) This reflex is present in man, and researches are being carried out at present by the author to find the precise amount of anæsthesia under which it may best be observed in normal cases, and the pathological cases in which it may be demonstrated with or without previous anæsthesia.

The reflex only disappears completely when anæsthesia is very deep, and remains long after the oculo-palpebral, patellary and the labial chin reflex of Dastre have gone. The reflex arc is constituted by the lingual nerve (sensory) through the mylohyoid branch of the inferior maxillary division and by the facial (motor). The digastric muscle produces the lowering of the inferior maxilla.

The stimulus was an electrical one applied to the tip of the tongue, and tracings of records were taken. Dogs, cats and rabbits were the animals used.

The following observations were made :

(a) The amplitude of the response depends on respiration, and is augmented markedly during active inspiration and at the beginning of expiration. It diminishes at the end of expiration and during the pause.

(b) The above action is exaggerated during asphyxia.

(c) The above periodic variation with respiration persists after the section of the vagi.

(d) Excitation of the central end of the cut vagus diminishes

the amplitude of the reflexes, and by a sufficient number of excitations it is completely abolished.

(e) Excitation by pinching or by electricity applied to various regions of the skin has almost always an immediate action on the amplitude of the reflex: for example, in general, the excitation of the ear produces a complete inhibition, whereas excitation of the buccal mucous membrane at once augments the amplitude of the reflex.

(3) Research on the oculo-cardiac reflex brings about, as many workers have already shown, an immediate rise in the arterial pressure, and the author agrees with this. He has tried to determine the part played by pain in the raising of the blood-pressure, and also in a more general fashion to analyze the rôle played by this factor in the reflex. Researches were made on 150 patients, and the tensiophone of Vaquez and Laubry was used for the pressure readings: for the production of the reflex the oculo-compressor of Rubinovitch was employed. The following observations were made: elevation of the systolic pressure does not appear to depend on the bradycardia of the reflex, and was present in 81 *per cent.* of the cases of oculo-cardiac reflex. In cases of oculo-cardiac reflex not accompanied by bradycardia, this elevation is paradoxical and without relationship to the phenomena of circulatory compensation: it seems to indicate the participation of the sympathetic system.

Pain does not appear to play a part in this elevation of blood-pressure. Researches were made in twenty-five cases of patients who had to submit to operation for one reason or another. The oculo-cardiac reflex was elicited before anæsthesia, and all these cases showed an elevation of blood-pressure; in these same cases anæsthetized till the threshold of the abolition of the corneal reflex an identical ocular compression was exercised; it was then found that augmentation of blood-pressure was produced in 72 *per cent.* of the cases.

I. EMSLIE HUTTON.

3. Ætiology of Mental Diseases.

The Inheritance of Mental Disorders [Über Vererbung geistiger Störungen]. (Arbeiten aus der Deutsch. Forschungsanst. f. Psychiat. in Münch., November, 1923.) Rüdin, E.

This is a general summary of the position of research into the inheritance of mental diseases. The author goes into considerable detail about the precautions which should be taken in such research, the possible errors which are likely to be introduced by the lack of such precautions, and the methods which are likely to give satisfactory results. The investigation of Mendelian factors in psychiatry is complicated by the limits of the material available, and by the uncertainty as to just what manifestations of mental disorder can be regarded as inherited entities and dispositions, or rather as reaction-formations produced by the interaction of inherited dispositions and environmental or acquired factors. One of the possible results of

such researches may be the discovery of a really sound basis for the classification of mental diseases through a clear separation of the different ætiological factors.

The methods advocated by the author and used in his school are calculated to eliminate as far as possible the inevitable sources of error. They are modifications of those devised by Weinberg, involving the investigation of the incidence of various types of disorder in the descendants of neurotic or psychotic parents, and the working out of statistical probabilities as to the type of inheritance factor which seems to be acting. Comparison with non-psychotic control families is insisted on. For instance, Huntingdon's chorea is found to be a simple dominant Mendelian factor; myoclonic epilepsy a simple recessive. In most forms of mental disease the matter is less simple, and much more research is still necessary to arrive at decisive conclusions.

In dementia præcox much work has been done. It is certain that there is present in these families a predominance of the psychopathic disposition which has been termed "schizoid," which plays a part, and may be dominant or recessive, but which requires a second factor, probably a recessive one, determining the degenerative process, to combine with it to produce the psychosis.

In manic-depressive insanity there is probably a combination of three factors, one dominant and two recessive; it is uncertain whether a "cycloid" character which predisposes to this psychosis is a monohybrid recessive or a dominant factor. Where manic-depressive and dementia præcox cases occur within the same family, the numerical relationships suggest a chance combination in the mixing of the two tendencies rather than any genetic relationship between the two.

In epilepsy the evidence points to some kind of recessive factor, but the material available is insufficient for certainty. The author gives a lengthy criticism of the methods of some American investigators, notably Davenport, and shows that their conclusions are not justified, and have been arrived at without due elimination of probable errors. This is particularly noticeable also in work on feeble-mindedness and criminality. Rüdin considers that most moral imbecility and much criminality is a manifestation of certain of the hereditary factors concerned in dementia præcox, and that such families are remarkably free from manic-depressive factors.

He suggests that the compulsion neurotic syndrome may result from an intermingling of schizoid and cycloid elements.

The possibility of inherited dispositions as contributory factors in the incidence of exogenic psychoses is considered at some length—research on the inheritance in cases of general paralysis and alcoholic psychoses is being done. He emphasizes the unreliability of the usual histories, since they are taken with more detail according to the presuppositions of the recorder, and he considers that this accounts for much of the alleged predominance of alcoholism in certain types of case, whereas he believes that the alcoholism is probably a result of neurotic or psychotic dispositions, which are the real factors affecting inheritance. He doubts the reliability of the evidence of

actual injury to the germ-plasm being capable of producing a real inheritable abnormality.

He emphasizes, however, that this line of research is as yet in its infancy, but he believes that it will produce valuable results for diagnosis and prophylaxis.

M. R. BARKAS.

Relation of Puberty to Behaviour and Personality in Patients with Dementia Præcox. (Amer. Journ. of Psych., July, 1923.) Gibbs, C. E.

Differences of opinion on the ætiology of dementia præcox are concerned with the relative importance attached to the nature and intensity of the external stimulus on the one hand, or to the mechanism and its capacity to respond on the other. Authorities are agreed that peculiarities of behaviour frequently preceded the onset of manifest psychosis.

The author reports a series of nine cases in which definite character changes appeared at puberty, though the psychoses did not develop until some years later. The change at puberty amounted in five cases to a reversal of type from lively activity to seclusiveness, and in two to a marked accentuation of a previous shyness. In one case who seven years later developed dementia præcox, a previously timid boy became at 13 aggressive and anti-social, while in another case, a formerly well-behaved boy, good at school, showed anti-social behaviour (truancy and stealing) at 13, and sudden seclusiveness at 16, followed by paranoid delusions and hallucinations. The ninth case was a girl, active and somewhat tomboyish as a child, who became seclusive at puberty, later showed various psychopathic traits, and at 40 had the first of several attacks of melancholia. In six of the nine cases the subsequent psychosis was dementia præcox, which was manifested at ages varying from 19 to 27; two cases developed a paranoid condition at 16 and 43 respectively, and one developed manic-depressive psychosis at 40.

In many cases there was a sudden failure in school work about puberty, attributable to derangement of instincts, emotions and sentiments rather than to failure of intelligence. Many of the cases gave histories of rapid growth at puberty and other evidence of disturbed metabolism, and it is suggested that the biologic changes may activate the reproductive instincts and associated emotions, and thereby condition instinctive and social behaviour reactions. The physiological inadequacy shown by some of these individuals involves not only the gonads, but the whole organism. Psychopathic traits existing before puberty may indicate a reaching back into childhood of these biologic inadequacies.

Hereditary traits are often first manifested at puberty, and abnormal character traits have been found to be frequent in the families of dementia præcox patients. In certain cases of dementia præcox it is difficult to determine whether seclusive behaviour appearing at puberty is part of the personality or part of the psychosis.

MARJORIE E. FRANKLIN.

4. Pathology of Mental Disorder.

Studies on the Cerebrospinal Fluid with an Acetic Anhydride-Sulphuric Acid Test. (Amer. Journ. of Psychiat., July, 1923.) Boltz, O. H.

The acetic anhydride-sulphuric acid test is essentially a modification of Liebermann's test for cholesterol. 1 c.c. of cerebrospinal fluid is placed in a Wassermann test-tube, 0.3 c.c. acetic anhydride is added drop by drop and the solution shaken; 0.8 c.c. of concentrated sulphuric acid is then added drop by drop, the solution again shaken, and after five minutes the colour of the fluid is examined against a white background. A blue-pink or lilac is positive, a blue tinge being the characteristic reaction.

The substance giving the test is not destroyed by heat as is that of the colloidal gold reaction; it is precipitated with globulin in the Noguchi test, but is not connected with excess of globulin, nor does it respond to tests for cholesterol.

The test was found to be negative in psychoses not associated with syphilis, to be positive in all cases of general paresis, and to be predominantly but not invariably positive in other cases of neuro-syphilis. The more advanced and active the syphilitic condition of the central nervous system, the more strongly positive is the test. The author regards it more as an index of degenerative nerve tissue than specific for neuro-syphilis, and attaches more importance to the test for purposes of prognosis than for diagnosis.

MARJORIE E. FRANKLIN.

Hemiplegias without Visible Brain Lesions in the Pneumonias of the Insane. (Amer. Journ. of Psychiat., July, 1923.) Canavan, Myrtelle.

In performing autopsies on mental hospital patients over a number of years, the author has been struck by the frequency with which hemiplegias of sudden onset occur among these patients without there being any *post-mortem* evidence of a cerebral hæmorrhage. The majority are undiagnosed cases of pneumonia. In 1,000 consecutive cases of mental hospital autopsies, 800 died of diseases above the diaphragm as compared with 640 in 1,000 cases at general hospitals, but in both series the incidence (28 per 1,000) of cerebral hæmorrhages was the same. Among the mental patients 222 of the series died of pneumonia. Physical signs of disease are often overlooked. This the author attributes to the non-co-operation of the patients, the atypical forms of disease and the major interest of mental symptoms. She emphasizes the diagnostic importance of the pulse-rate and the cerebrospinal fluid, while useful information may be obtained from the examination for deviation of eyeballs, the fundus, blood-pressure, leucocyte count, and urine (retention of chlorides in pneumonia). The comparative scarcity of cerebral hæmorrhage is unexpected in view of the frequency among the insane of abnormal kidneys and of arteriosclerosis. The author suggests that the regular routine and protected life may be factors.

MARJORIE E. FRANKLIN.

- (1) *The Mineral Substances of the Blood in a Case of Stupor* [*Les matières minérales du sang dans un cas de stupeur*]. (*L'Encéphale*, July-August, 1923.) Blanchetière, A.
- (2) *Test for Phenol-sulphonaphthaline in Mental Diseases* [*L'épreuve de la phénolsulfonephthaléine dans les maladies mentales*]. (*Ibid.*, July-August, 1923.) Targowla, Rene, et Badonnel, Marguerite.
- (3) *Lesions in the Posterior Horns of the Cord in Encephalitis Lethargica* [*Lésions des cornes postérieures de la moelle dans l'encéphalite léthargique*]. (*Ibid.*, July-August, 1923.) Tinel et Schaeffer.

(1) In a series of researches at the Salpêtrière Claude and Blanchetière demonstrated that there were important disturbances in the mineral metabolism in certain nervous affections, and recently the author has examined the blood of a case of stupor. He gave doses of 5 grm. of potassium chloride and made repeated examinations of the blood, and recorded the following important observations :

(a) The lowering of the potassium content tells at once on the total blood and on the serum—that is to say more definitely on the globules and on the plasma.

(b) The phenomenon is constant, and was demonstrated at relatively long intervals in the course of the stupor.

(c) As in the normal blood the potassium localized itself in the red blood-cell, in this case, therefore, the lowering of the potassium content of the blood is not brought about by the inability of the red blood-corpusele to fix the metal.

(d) The aptitude of the red blood-cell to fix potassium seems in no wise diminished, because in one of the analyses after the dose of potassium chloride was given the cells contained for a time the same amount as in a normal case.

(e) The slowness with which the potassium content of the blood augments is quite remarkable. When the blood was very poor in potassium a dose of potassium chloride was given and a brisk elevation of 50 *per cent.* was obtained, and then followed a slower augmentation, reaching a maximum, after which the potassium content began to lower. A second dose of potassium chloride immediately determined a new augmentation, less important, however, than in the first case, because the potassium had not descended to a minimum. Three days afterwards the fall was complete and the minimum appeared to be even slightly lower than before. The author does not commit himself as to whether this fall of the potassium content is constant and specific in cases of stupor, but he is carrying out researches on this point. He thinks that as the potassium ion plays an important rôle in the fixation of the oxygen of the hæmoglobin, its deficiency in the blood may involve disturbances which cause a slowing of oxidation processes which is intimately related to the mental state of the patient.

(2) This paper is based on work proposed by Rowntree and Geraghty in 1910 with regard to kidney function.

The technique which was carried out on 260 patients was as follows : The patient absorbs 150 cubic centimetres of water and empties the bladder ; immediately afterwards he is given an intra-muscular

injection of a solution of soda containing 6 mgrm. of a colouring material. Seventy minutes afterwards the contents of the bladder are examined.

The following were the main conclusions: In chronic maniacal states, and in the psychopathic syndromes which are apt to be confused with dementia præcox, it was found that there was normal elimination of phenol-sulphonaphthaline except in a case where there was co-existing nephritis.

During the course of mental disturbances associated with arteriosclerosis and senility, phenol-sulphonaphthaline is almost constantly diminished and associated generally with other manifestations of renal insufficiency. In twenty-four cases of general paralysis of the insane the elimination of this substance was below the normal.

In confusional states and also in manic-depressive psychoses renal insufficiency was very frequently present, and was often associated with liver insufficiency. This symptom was inaccessible to cardiotonics and diuretics, but quickly disappeared when the mental condition cleared up.

(3) The case of a man, æt. 34, brought to hospital with the history that he had been delirious since the preceding night; he had suffered from cervico-brachial pains for eight days previously and had a slight clonic contraction of various muscles; on account of this latter symptom he was diagnosed at once as encephalitis lethargica—a diagnosis which was found twenty-four hours afterwards at autopsy to be correct.

The following notes were made on the brain and spinal column: In the nuclei of the mesencephalon, perivascularitis was present. The cervical portion of the cord showed in its whole length very marked lesions, which were absolutely confined to the posterior horns; these were bilateral and characterized by numerous foci of perivascularitis. Apart from a diffuse meningeal infiltration there was no other lesion whatever of the dorsal or lumbar portions of the cord. The anterior horns of the cervical portion of the cord were normal.

The author suggests that the cervico-brachial pain is due probably to the lesions in the posterior horn, and points out that up till the present we have not known the origin of these algias which are so characteristic of encephalitis lethargica. By reason of their variable character, paroxysmal occurrence, intensity, and other reasons, they have been considered to be central in origin. Most authors have attributed them to the thalamus, but nevertheless these algias are nearly always diplegic, and very rarely monoplegic. The hypothesis therefore that these algias are caused by lesions of the spinal ganglia is more feasible, but the persistent absence of peripheral signs throws doubt upon this. Moreover, in the present case no inflammatory lesions of the spinal ganglia were present. Consequently it is a logical conclusion that all algias in encephalitis are due to lesions of the posterior horn.

I. EMSLIE HUTTON.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE usual Quarterly Meeting of the Association was held in the Medical Society's Rooms, 11, Chandos Street, London, on Thursday, February 21, 1924, under the presidency of Lieut.-Col. E. Goodall, C.B.E., M.D., F.R.C.P. The Council and various Committees met earlier in the day.

MINUTES.

The minutes of the previous meeting, having already appeared in the *Journal of Mental Science*, were taken as read and approved.

OBITUARY.

THE PRESIDENT said that he unfortunately again had the sad duty, as last time, to lament the loss of valued colleagues by death. On the present occasion he had to mention the death of four members, one of them the late Registrar, Dr. Alfred Miller. The others were Dr. Clarke, of Toronto, and Dr. Evan Powell, of the Nottingham City Mental Hospital, and Dr. Sankey, of Oxford County Mental Hospital. He only that day heard of the deaths of Dr. Charles Kirke Clarke, Dr. Evan Powell and Dr. R. H. Heurtley Sankey; but the news of Dr. Miller's death came some weeks ago, and he had the advantage of some notes about Dr. Miller with which he had been kindly supplied by Dr. Rambaut, of St. Andrew's Hospital, Northampton. Dr. Rambaut was a particularly close friend of Dr. Miller, and no one was in a better position to state facts concerning Dr. Miller's life, and he would communicate an obituary notice to the *Journal of Mental Science*. For very many years Dr. Miller has been Registrar of the Medico-Psychological Association. The work of this office has enormously increased since its foundation. Dr. Miller devoted much time and thought to its exacting duties. All the members of the Association will agree that the ever-increasing labours of the Registrar were admirably carried out. And he never spared himself in the cause of mental nursing. He never missed a Council meeting, and rarely was absent from any of the Meetings of the Medico-Psychological Association.

Dr. Miller will always be remembered as a maker and great administrator of Hatton Mental Hospital, and as one of the pioneers of modern mental nursing.

He had a genius for friendship, and a host of personal friends who were attracted to him by his great abilities, strong commonsense, loyalty and invariable infectious good humour. His hospitality was unbounded.

Dr. Miller's home life was a very happy one. He leaves a widow and two daughters to mourn the loss of a good husband and a good father.

Dr. PERCY SMITH said he desired, as the most senior Past-President in the room, to associate himself with all that had been said concerning Dr. Miller. Dr. Miller had been Registrar for so many years that the speaker did not remember another, and all members were familiar with the extraordinary ability Dr. Miller showed in that office. He had unflinching good humour and courtesy, and his delightful personality was enjoyed very much.

Dr. O'CONOR DONELAN, as a member from the Irish Free States, wished to associate himself with the expressions of regret at the loss of Dr. Miller. He took a deep interest in the working of the Association, in all its branches; he had a good deal to do with Dr. Miller at one time, and was constantly in contact with him, and a more painstaking Registrar could not be found. He was invariably courteous and kind, and when applied to for help he always gave it willingly and kindly.

THE PRESIDENT, continuing, said Dr. Charles Kirke Clarke, of Toronto, was only recently before the Association, giving the Maudsley Lecture. He was a man who had done an immense amount for mental disorder and deficiency, also for prophylaxis and social hygiene in Canada, and he held a most responsible position in regard to the supervision of immigrants into Canada. In those respects he was a man of high position in Toronto, and the Association did him honour in asking him to deliver the Maudsley Lecture.

Dr. Evan Powell was, for at least thirty years, Medical Superintendent at the Nottingham Borough Mental Hospital, and he only retired five or six years ago. He conducted that institution in a most successful manner.

Dr. Sankey, formerly of Oxford County Mental Hospital, was one of the oldest members, if not the oldest member, of the Association, his membership dating from 1854. The speaker understood that Dr. Sankey was very prominent in founding the After-Care Association.

It would be the wish of the Association to send to their relatives a message of sympathy and condolence.

The motion was agreed to by members rising in their places.

BUSINESS ARISING FROM PREVIOUS COUNCIL MEETING.

(a) Report of Council *re* Conference with the General Nursing Council.

(b) Discussion on the future training and examination of mental nurses.

The PRESIDENT said it was his duty to give the facts concerning this matter pretty fully. The General Nursing Council for England and Wales was appointed under the provisions of the Nurses' Registration Act, 1919. "By the said Act, the Council is directed to make rules requiring as a condition of the admission of any person to the Register that that person shall have undergone the prescribed training, and shall possess the prescribed experience in the nursing of the sick—

"requiring that the prescribed training shall be carried out either in an institution approved by the Council in that behalf, or in the service of the Admiralty, the Army Council, or the Air Council, and the Council is directed to make rules for regulating the conduct of any examinations which may be prescribed as a condition of admission to the Register, and any matters ancillary to or connected with any such examination.

"These provisions apply to future nurses as distinguished from existing nurses defined by the Act."

Existing nurses were those who had gone through the necessary training and experience and obtained a certificate of efficiency before 1919.

"In pursuance of these duties, the Council has adopted the accompanying syllabus of subjects for the training and examination of mental nurses"; that was, to all intents and purposes, the Syllabus of this Association, though slightly varied in regard to the preliminary examination.

That the efforts made by the Association had been appreciated was evident from this note: "It should be observed that the revised Syllabus of the Medico-Psychological Association has, with a few alterations, been adopted by the Council. An advance copy of this Syllabus was, before its issue by the Association, submitted to the Council for its consideration. The Council takes this opportunity of expressing its appreciation of the services of the Association during the past thirty years in the training and examination of mental nurses throughout the British Isles."

At the last general meeting of the Association, those present authorized the Council to deal with this matter relative to the General Nursing Council. It arose because the Minister of Health was desirous, before giving his authority to this Syllabus of the General Nursing Council, of doing away with the dual set of examinations, on the same subject, with clashing; of establishing a *modus vivendi* between this Association and the General Nursing Council; and the Association authorized its Council to choose representatives to meet the Nursing Council. They were Prof. Robertson, Dr. Worth and Dr. Soutar, Col. Lord, Dr. M. A. Collins, Dr. Daniel, and himself. These representatives stated they were authorized by the Council to say the Association proposed to carry on its examinations, but the representatives were willing to hear suggestions from the General Nursing Council. There was no need for him, the President, to detail the various preliminary hesitations, fencing for position, and so on; ultimately the Chairman, Sir Wilmot Herringham, said he was willing that the Association should appoint an Advisory Committee to act with the Mental Committee of the General Nursing Council, to confer with them on matters pertaining to the final examination. Sir Wilmot was also prepared to propose that the Association should nominate examiners for the approval of the General Nursing Council. He did so propose to his Council, and those recommendations were adopted.

The Council invited the Medico-Psychological Association to form an Advisory Committee to assist the General Nursing Council, such Advisory Committee to meet

the Mental Nursing Committee of the General Nursing Council for the purposes of matters appertaining to the final examination, the resolutions of such meetings to be recommendations to the Council. Secondly, they invited the Medico-Psychological Association to nominate the examiners for the final examination, for appointment by the General Nursing Council.

The delegation said they would take the offer to their Council and report upon it, and go into the matter. A letter had been received from the Registrar of the General Nursing Council embodying the invitation on those two points.

Members should recognize that this was an offer of an unusual, if not of a unique, kind, and it was doubtful if that body would have made such an offer to any other association or body. If the offer were accepted by the Association, the latter would, no doubt, acquire a very influential position in respect to the training and the examination of their nurses. That such was the case was shown by the perturbations of various persons and bodies as to this proposition; in fact this invitation was the subject of much discussion, and in the *Nursing Times and Mirror* there was a report of a meeting at which those present, the Associations of Matrons of General Hospitals, protested strongly against this Association having been singled out in this favoured way; and they went so far as to ask that the General Nursing Council should rescind their resolution, and withdraw the invitation. The speaker merely mentioned that in order to show how privileged was the position in which the Association had been placed by the invitation. And it must be remembered that the nurses of the Association were mostly young people, and therefore they were not likely to look ahead much, and did not know what was involved in this. That meant that the Association had a serious duty towards them in deciding on this matter. If mental nurses did not take the preliminary examination of the General Nursing Council, they of course would not be eligible for registration on the Register of the General Nursing Council, nor would they be able to present themselves for the final of that body hereafter; and when they so decided they would have to go back to the preliminary, and so waste a lot of time. In such event, if they did not know, they could with justice say—"We might have been told by those who are looking after us." And there would be another great advantage which they would have as a result of taking the State examination and getting on to the State Register, *i.e.*, that many institutions for general nursing would receive them for a training of two years, instead of the usual three or four years, if they had the certificate and were on the State Register. It was open to considerable doubt whether such an advantage would be accorded to nurses on a private register kept by the Medico-Psychological Association.

These matters had been before the Council of the Association and had been very carefully deliberated upon—yesterday for one and a half hours, and to-day for fully an hour—and before reading the resolution which was arrived at by the Council of the Association, he wished to say that if the Association did not accept it, it would be necessary for the Association to maintain a register closely corresponding to the State Register, in respect to accuracy, and dealing with penal cases, etc. The proposal was that the Association should maintain its examinations. If that were not decided for other reasons, it would be necessary to do it out of justice to the nurses who fell due for approaching final examinations.

After full discussion, the Council, which he believed was unanimous, came to this decision, which was now submitted to this meeting for its consideration:

"The Medico-Psychological Association appreciates and accepts the offer made by the General Nursing Council, as set out in their letter of the 14th of December, 1923. The Association suggests that it would be only reasonable that the Advisory Committee of the Medico-Psychological Association should also advise with regard to the preliminary examination for mental nurses." In other words, they would recommend that the invitation of the General Nursing Council be accepted, with that suggestion.

The matter was now open for discussion.

Prof. G. ROBERTSON said he entirely agreed with the remarks of the President; that a very high honour had been conferred on the Medico-Psychological Association by the General Nursing Council in having asked the former to establish an Advisory Committee on the subject of mental nursing. No other body which trained or taught nurses had had any such offer made to it. Members would know, in the past, the feelings of pride which the great London hospitals had in their training of nurses, and so it would be realized what their feelings would be

when they knew that this body had been specially asked to advise the General Nursing Council with respect to mental nursing. This meant that this body would be able to put its views before the General Nursing Council. It was known that, owing to unfortunate circumstances, the representation of the mental side on the General Nursing Council was very weak, and had it not been for the fact that Dr. Bedford Pierce was specially appointed on that Council, this Association would have had no representation on it at all. And in Scotland the Medico-Psychological Association was not represented on that body. Now, by means of this Advisory Committee, which would meet the Mental Nursing Committee of the General Nursing Council, the Association would have far greater powers than if it had had only one or two representatives on the General Nursing Council itself. He thought, therefore, that a very favourable offer had been made to the Association, one which it would be very foolish to refuse. The object the Association had had in view was, as far as possible, to combine the examinations, that they should coalesce in some way without any injury to either party, and with all the advantages to mental nurses of association with both bodies, the Medico-Psychological Association and the General Nursing Council. So far as the Final examination was concerned, he thought this would be carried out, because, in the first place, as the President explained, the Association had been invited to nominate the examiners, and, naturally, they would nominate the examiners who were now conducting their own examinations, and so the Association's examiners would conduct the final examinations for the General Nursing Council.

In the second place, as the President said, the General Nursing Council had selected the Association's Syllabus and training for their examinations, so their examinations would be set on identical subjects from the same Syllabus, and with very slight alteration. This Advisory Committee would be conferring with their Mental Committee, and would be able to discuss the various points as to the nature of the examinations and how they would be conducted. The final examination would be practically identical for both bodies—a very great step.

The only point on which members might wish for improvement would be with regard to the preliminary examination. Nothing was said with regard to that in the proposals made to this Association by the General Nursing Council, for a variety of reasons, which he need not now detail. But when it was considered by this Council, they found it would be impossible to advise with regard to the final examination without also being able to advise with regard to the first examination. One point on which this Council differed from the General Nursing Council was, that in the preliminary examination of the latter, which was uniform for all classes of nurses, all reference as to the relationship between patient and nurse was excluded. But members of this Association regarded this as a fundamental point, that at the beginning of her training the nurse should have these points put before her, and should be examined on them. In this respect it seemed that the mental nurse had been sacrificed, unintentionally, to the hospital nurse, who had such a strong representation on the Council, *i.e.*, the General Nursing Council. And several other considerations made it essential that this Association should also advise as to the first examination; therefore that additional suggestion had been made. The representatives of the Association had been treated in a respectful way by the General Nursing Council and the Ministry of Health, and had put the suggestion in a modest way, namely, that it was only reasonable that the Association should have something to do with the first examination, and it was hoped that that concession would be granted. If so, a very good day's work had been done.

The PRESIDENT said it could be taken that this was an offer which would not be repeated by the General Nursing Council. Standing at this parting of the ways, he thought this should be appreciated.

Dr. BEDFORD PIERCE said he was not intending to speak at all on this matter to-day. With regard to the preliminary examination, it would be difficult to introduce matters which were peculiar to mental hospitals, seeing that the great bulk of the candidates would be from general hospitals. He thought the preliminary examination must necessarily be of a general fundamental kind, applicable to nurses of all kinds, and not exclusively suitable for any particular class of nurses. Therefore the suggestion just offered by Prof. Robertson presented great difficulties. He was sure the General Nursing Council would welcome any suggestions from this Association, or from the Joint Committee which it was proposed to set up, which would facilitate the entry of nurses for the examination. There were

serious geographical difficulties and many others peculiar to mental hospitals which were not at all fully understood by the General Nursing Council. If they were effectively put before the Council, he was sure they would be listened to, and the recommendations of the Committee would, as far as possible, be accepted.

The only other remark he wished to make now was, that he had been deeply interested in the training and education of mental nurses ever since he joined the Association; the stimulus of that interest came from Dr. Miller and others. And now that this Act had been passed, he had earnestly hoped that the bodies concerned should co-operate, and not seek to go divers ways. He felt sanguine that this proposal could be so worked that the new examinations would be acceptable to the Association and to the General Nursing Council, and would be an advance on what had happened in the past. (Applause.)

The PRESIDENT said he had concerned himself merely with preliminary explanations and observations. It was advisable that the meeting should have a motion before it, and he asked whether Prof. Robertson would move in the sense he had indicated in his remarks.

Prof. ROBERTSON said he would be pleased to move "That the Medico-Psychological Association appreciates and accepts the offer made by the General Nursing Council, as set out in their letter of the 14th of December, 1923. The Association suggests that it would be only reasonable that the Advisory Committee of the Medico-Psychological Association should also advise with regard to the preliminary examination for mental nurses."

Col. LORD said he had very much pleasure in seconding that motion. He was a member of the deputation which went to the General Nursing Council, and he thought the Association had somebody to thank for this solution of the difficulties which presented themselves. The way matters shaped themselves was rather interesting. Sir Arthur Robinson opened the proceedings. Next Dr. Goodall and Sir Wilmot Herringham spoke, but neither of them appeared to lay their cards on the table. Then Dr. Bond, at the request of Sir Arthur Robinson, intervened, and made, very tentatively, a suggestion which, finding ready response from both sides of the table, initiated a discussion that speedily led to a close approximation of views hitherto divergent. The whole of those proceedings had turned out very successfully, and some day, perhaps, members might have an occasion to thank him for that magnificent habit he had of getting over these difficulties, and proving a real friend to the Association. He believed the result would be a great comfort to the nurses; he was confident it would be a great comfort to the county committees of the county mental hospitals. He did not doubt that when the Advisory Committee met the General Nursing Council they would be able to tackle a problem which would have to be solved, namely the financial problem, and he hoped it would be possible to reduce the fees by a reciprocity which, as he said in the current issue of the *Journal of Mental Science*, ought to actuate the bodies associated with the treatment of the sick.

Dr. J. FRANCIS DIXON said that before the proposed resolution was put before the meeting he would like to have one point cleared up. Part of the resolution stated it was suggested that the Advisory Committee should be consulted in reference to the preliminary examination; and he would like to know whether it was proposed to suggest the material which was to compose the preliminary examination, or whether that preliminary examination was to be common to all nurses, without exception. Dr. Bedford Pierce, in his remarks a few minutes ago, conveyed to the speaker's mind that there did not seem to be any chance of any alteration in the subject-matter of the preliminary examination from the special standpoint of mental nurses. Was the question, then, one which would affect the method of conduct of the preliminary examination, rather than the material contained in the examination?

The PRESIDENT replied that in regard to the material of the examination, he took the position to be as follows: that Section I of the Association's Syllabus, which was concerned with the preliminary examination, went into the matter of the nature of mental disorder, the relation of nurse to patient, the responsibilities of nurses, and the general duties of a nurse—such things as that. The General Nursing Council provided for the same things in their final examination; they considered they were best dealt with there. Some of the members of the Council of this Association were of opinion that those matters ought to be dealt with in the preliminary examination—so far as mental nurses were concerned at any rate—

and the point raised was as to whether the General Nursing Council were likely to be got to see that.

Dr. J. FRANCIS DIXON said he thought that particular point was only brought out in the revised Regulations of the Medico-Psychological Association; it did not appear in the original preliminary examination scheme. (Hear, hear.) It seemed to him to be a very big thing to expect the General Nursing Council to order their preliminary examination according to the requirements of any section of nurses; that was hardly to be expected. He believed the change in the curriculum for the mental nurses was an advantage, and it was scarcely reasonable to expect the General Nursing Council to alter their preliminary examination, which he understood was to be the common examination for all nurses as a means of entrance into the profession.

Dr. WOLSELEY LEWIS said that while he was in agreement with the first part of this resolution, he found himself in dissent in regard to the last part of it, that concerning the preliminary examination. The reason was, that for many years the Association struggled hard to get a Nurses' Registration Bill passed. One of the chief objects in doing this was to place nursing on a national basis, and to bring mental nurses into the same fold as the general hospital nurses. As the President was aware, originally it was suggested there should be only one examination held by the General Nursing Council, and he thought he, the speaker, was the originator of the suggestion that there should be two examinations. His object in making this suggestion was: that if there was a preliminary examination common to and obligatory on all branches of nursing, it would necessarily bring all nurses into one fold, and would have the effect of putting the nursing profession on a national basis. It seemed to him that the Association was taking overmuch upon itself in suggesting it should have a voice in dictating to the General Nursing Council as to what the subject-matter of their preliminary examination ought to be—an examination which was to be common, not only to mental nurses, fever nurses, children's nurses, but all nurses. Personally, he thought it would be a great error on the Association's part to make any such suggestions to the General Nursing Council, because it would tend to estrange the mental nurse from the general nursing fold—the one thing he was particularly anxious should not occur. He was most anxious there should be reciprocity between the general nurse and the mental nurse, and any attempt to make a difference between mental nurses and other nurses would tend to make a distinction that would be very unfortunate. He would therefore like to move that the second part be left out.

Dr. J. FRANCIS DIXON said he would be glad to second that.

The PRESIDENT said the motion would then be—"That the Medico-Psychological Association appreciates the offer made by the General Nursing Council, as set out in their letter of 14th of December, 1923, and accepts the same."

Dr. PERCY SMITH said that when he heard the resolution read it occurred to him that they were rather trying to force the General Nursing Council to accept the Association's position, and as that body had already invited the Association to co-operate, was it not better that the Association's Advisory Committee should be left with a free hand to bring forward anything that they thought necessary in the private discussions which would take place. If the second part of the resolution were included, it would seem that the Association were trying to force the point down the throat of the General Nursing Council, and the attempt might create friction. He preferred that the second half should be left out.

Dr. T. S. GOOD said surely it did not make much difference. If the preliminary examination were accepted by the Association, it would still continue to train its nurses to consider the mental side of the subject when teaching them in the mental hospitals. It was not the examination that mattered; before a nurse got to the final, it would be evident whether or not she knew anything about looking after the patients from the mental point of view; it did not stop one training one's nurses in that way. Judging from the experience he had had at two hospitals, the great difficulty was to get them to go in for an examination. They could be transferred from one to another, according to their suitability. He supported Dr. Wolseley Lewis's remarks.

Dr. RICHARD EAGER asked whether it would not be possible for the Association to modify its examination Syllabus to suit the General Nursing Council, inasmuch as the latter had offered the Association certain advantages in regard to the final. It would be courteous to do so. (Hear, hear.)

Dr. E. B. SHERLOCK said he was entirely in accord with the attitude of Dr. Wolseley Lewis towards the amendment; it would be most unreasonable for the Association to try to interfere with the General Nursing Council. He was more concerned with the first part of the resolution, and he would like more information in that connection. To what extent did it commit the Association? The latter appreciated the offer which had been made, and proposed to accept it; what was it proposed to give in exchange? Was there an undertaking that the Association's examinations would be discontinued in a given time? If so, when? The question of the cost of the examination had not been touched on, and if any light could be thrown on that, he would be glad.

The PRESIDENT said he thought he was right in expressing the view of the General Nursing Council by saying that whether this Association continued to hold its examinations or not was nothing to them. His, the speaker's, view was that some institutions would continue to hold their examinations, for a greater or a less time, and others would not; but that was the Association's private affair. The question of fees was not one which the General Nursing Council would bandy with this Association, or with anyone else; they had gone most carefully into the matter of the fees, and they could not do the examinations for less—2 guineas registration, 2 guineas for the preliminary examination, 3 guineas for the final—while paying examiners what they should be paid. They doubted if they could get examiners at the fees. For his part, he thought the fees were perfectly reasonable.

Prof. G. M. ROBERTSON said he would like to give an answer to some remarks which had been made concerning the second part of the motion. It must be understood by the meeting that the invitation which the Association had received from the General Nursing Council only referred to the final examination: it did not refer to the first examination at all. And there were many important matters in connection with the first examination which, he thought, the Advisory Committee ought to discuss with the Mental Nursing Committee of the General Nursing Council. The President had just said the question of fees was one which they probably would not discuss with the Association or its Committee. But an important matter was the places at which the examinations would be held, and that was a question the Advisory Committee might bring forward. He knew of one institution in Scotland, whose nurses would be put to the expense of £10 to £15 for travelling alone for the examinations. According to the information which had been received from the General Nursing Council, the Advisory Committee could only discuss matters relating to the final examination, not with regard to the preliminary; many questions would have to be raised. Dr. Wolseley Lewis mentioned that it was good to have a uniportal system, that all classes of nurses should pass a certain examination, and with that the speaker agreed. He thought mental nurses should pass in all the subjects laid down by the General Nursing Council for the preliminary examination; but he thought that, in addition, they should pass on what related to this specialty. This was one instance of many in which the mental nurse had been sacrificed for the hospital nurse, so as to bring the former into the general line; the mental nurse was put into the second place, because it had been only poorly represented. Mental nurses would be able to say they had passed all the subjects in which the ordinary nurse had passed, and one additional subject. By the second clause in the resolution he was simply asking that this Advisory Committee might have the power of negotiating with regard to the preliminary examination, as well as the final examination. He was not attempting to lay down any laws. The findings of the combined Advisory Committee and the General Nursing Council would be sent to the Medico-Psychological Association, and they might be accepted, or not. It would be a great advantage to the training of the mental nurses if this point could be put before the General Nursing Council. There would be a meeting in Scotland immediately between the Scottish Division and the General Nursing Council of Scotland, and this was a point on which great stress would be laid. He hoped the Association as a whole would also take that view, as he did not think it would commit them to anything of an unpleasant nature, and he considered the wording was very respectful.

Dr. A. N. BOYCOTT said he was very much in favour of Dr. Wolseley Lewis's contention. In view of Prof. Robertson's last statement, would it not be well to divide the two questions, and make two resolutions? In the first part, by omitting reference to the preliminary examination, the offer was accepted. With

regard to the second part, there were numerous questions concerning the preliminary examination, not only training, but the conduct of the examination, requiring discussion. There should be some way by which the Association, either through its Advisory Committee or other means, could represent matters to the General Nursing Council. With regard to practical means of carrying out the training and the examination, one point was as to whether every probationer could be given six months in the sick wards before entering for the preliminary examination. It would be possible to answer "Yes" to that for the final, but in many mental hospitals it would be difficult for every probationer to have six months in the sick wards before the preliminary examination.

Dr. McRAE reminded the Association it had agreed to accept the offer. True, it had reference to the final examination, but the greater included the less. The question of the final examination had to be discussed and determined. It followed that what was going to be done at the preliminary examination would also have to be discussed and advised upon by the Advisory Committee. Hence it was not necessary to add the second part.

The PRESIDENT suggested the following wording: "The Association suggests that there are also questions relative to the preliminary examination which, in their judgment, should be discussed between them and the General Nursing Council."

Prof. ROBERTSON said he was prepared to accept that alteration if his secondere would do so. The General Nursing Council established a very great difference between the preliminary examination and the final examination, and their invitation only extended to the final examination, precluding the preliminary.

Col. J. R. LORD said he was willing to accept the proposed modification. He thought there would be no harm in the general hospital nurse gaining some knowledge on the mental side—on the mental states of sick people. He agreed that if there was to be a one-portal system, whatever was put in as a requirement for the preliminary would be applied to all nurses. He saw no objection to that, and if he were on the Advisory Committee he would support any suggestion that in the preliminary examination the candidate should show she had some notion of the alteration in mental state which occurred in sick people.

Dr. BEDFORD PIERCE said that the Mental Nursing Committee of the General Nursing Council considered all matters affecting mental nurses, and he would have thought that the Joint Committee could have discussed questions relating to the preliminary examination. He thought it would be wise to make some reference to it, either in the resolution, or in a covering letter.

Dr. M. J. NOLAN said that in Northern Ireland matters were run on the same lines as the British Register, and the existing Regulations were that any Act which operated in England would operate also in Northern Ireland in the same way. An important point which had been missed in the discussion was, that no reduction of knowledge for the preliminary was asked for, but more demanded; general nurses should be required to know something of mental nursing.

The PRESIDENT asked whether, in view of the discussion which had taken place, the mover and seconder of the amendment would agree to withdraw it. ("No.") He then read the amendment, as follows: "That the Medico-Psychological Association appreciates the offer made by the General Nursing Council, as set out in their letter of 14th of December, 1923, and accepts the same."

22 voted in favour, 15 against.

The PRESIDENT: That now becomes the motion, and you can propose another amendment if you wish. I put it as a substantive motion.

Agreed.

The PRESIDENT said it was necessary for this meeting to appoint an Advisory Committee to meet the General Nursing Council; there was urgency in the matter. Eight names were considered in Council, and he asked whether eight was considered a sufficient number.

Dr. BEDFORD PIERCE said the Mental Nursing Committee numbered eight.

The PRESIDENT said it was thought the members of it should reside in or near London, because of the expense of travelling otherwise, since meetings would be held monthly. The expenses of the members of the General Nursing Council were paid, but not those of the Association's members, at present.

Col. J. R. LORD proposed that the following members of the Association be appointed by the Association as an Advisory Committee to the General Nursing Council concerning the mental nursing examination: Dr. M. A. Collins, Dr. Reginald

Worth, Col. J. R. Lord, Dr. A. W. Daniel, Dr. J. Chambers, Dr. A. N. Boycott, Dr. A. A. W. Petrie, Dr. Langdon Down.

Dr. TIGHE thought there should be one representative of each Division; for instance, there were many large asylums in Lancashire and Yorkshire that should be represented on the Advisory Committee.

The PRESIDENT said he hoped Dr. Tighe noted the fact that the expenses could not be met by the Association; whether the local authorities would do so ultimately was another question.

Col. LORD said the Advisory Committee would be appointed annually, and this particular Committee would be due to be re-elected in July, at the Annual Meeting. By that time some experience would have been gained; it was a sort of preliminary canter.

Dr. PERCY SMITH seconded the names of the proposed Committee.

Dr. J. FRANCIS DIXON said he thought it very important, notwithstanding the expense and time taken up, that some effort should be made to distribute this representation of the Association over a wider area than was represented by the names suggested; some representation of Scotland and northern parts of England should be chosen.

The PRESIDENT said it was only England and Wales the meeting was concerned with.

Dr. DIXON proposed Dr. Bower, of Springfield Hospital, Bedford.

Dr. BOWER said he could not stand; an asylum man who had been doing some work on the subject was required.

The resolution, embodying the original names, was put and carried.

The PRESIDENT said another point was, that the Council considered it would be desirable to obtain a Charter for the Association. Legal advice had been taken on the subject by the Treasurer, who reported to the Council. It would cost about £110, besides solicitors' fees. It was considered to be well worth while, to strengthen the position of the Association, especially at the present juncture. A point was made at the meeting of the Association with the General Nursing Council that the former was not a chartered body, and that it might dissolve to-morrow, and hence it had no *locus standi*. It was left to the Treasurer and Secretary to go further into the matter and report.

Prof. ROBERTSON said that, arising out of the question of the General Nursing Council and the Advisory Committee, the Scottish Division had been invited by the General Nursing Council of Scotland to meet them, and it was possible the Scottish Division would have to appoint an Advisory Committee. He wished to know whether the Scottish Division would receive powers to appoint this Committee of their own, or whether it would be necessary to come to the Association for the appointment of their Committee. He also asked whether the Scottish Division could come to any conclusions with regard to the powers of this Advisory Committee; if, for example, should the Scottish Nursing Council give them power to deal with this preliminary examination, they should refuse to accept pending the matter coming before the Association as a whole. This meeting was appointing an Advisory Committee dealing with England alone, and he asked whether the meeting would give the Scottish Division power to act in the matter.

Col. J. R. LORD said that was a matter for the Scottish Nursing Council; they wanted certain advice, they wanted advice concerning Scotland, and he, the speaker did not see why the Scottish Division should not be empowered to deal direct with the Scottish General Nursing Council; the Scottish Division was part of the general Association, and the larger contained the lesser. It could be left in Dr. Buchanan's hands quite safely to keep the Council and English Committee posted, and Prof. Robertson could well be left to represent the general views of the Association, and apply them to the local conditions which suited Scotland. The same applied to Dr. R. R. Leeper and the Chairman of the Irish Division, to get the best conditions possible on behalf of the Association from the Irish Nursing Council. He therefore proposed that both those Divisions, through their Secretaries, be empowered to negotiate on behalf of the Council of this Association and the Nursing Councils.

Dr. PERCY SMITH said that, as a mere Englishman, he would second that.

Dr. W. M. BUCHANAN said that in Bye-law 24 it provided that no Division should have power to speak or act in the name of the Association or to commit the Association to any engagements; therefore it would be necessary to give authority which would over-ride that Bye-law.

Prof. ROBERTSON said that if the authority of the Association were given to-day, that would not be any over-riding of the Bye-law.

Col. LORD agreed; he thought the general meeting could suspend that Bye-law, and he proposed that notwithstanding anything contained in the Bye-law, the Council do as suggested.

The PRESIDENT said he did not see how this over-riding could be authorized by this meeting; some report of the proceedings in question would require to be made to this Association; the matter would have to be left for the present.

Dr. MENZIES said all that had to be done was to make a short formal report and submit it to each quarterly meeting, then it would comply with the Bye-laws.

ELECTION OF CANDIDATES.

The following were elected Members of the Association, the scrutineers being Dr. Eager and Dr. Dixon.

ROSE, EDWARD SNOW, M.R.C.S., L.R.C.P.Eng., Assistant Medical Officer, Claybury Mental Hospital; Steward House, Claybury, Woodford Green, Essex.

Proposed by Drs. G. F. Barham, F. Paine, and H. N. Parnis.

LEWIS, JOHN BIDDULPH STRAFFORD, M.R.C.S., L.R.C.P.Lond., Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex.

Proposed by Drs. G. F. Barham, F. Paine, and H. N. Parnis.

RUDOLF, GERALD DE MONTJOIE, M.R.C.S., L.R.C.P.Lond., D.P.H., Assistant Medical Officer, Claybury Mental Hospital, Woodford Bridge, Essex; 298, Denmark Hill, S.E. 5.

Proposed by Drs. G. F. Barham, F. Paine, and H. N. Parnis.

JOYNER, CHARLES, M.A., M.B., Ch.B., Senior Assistant Medical Officer, Derby County Mental Hospital, Mickleover, near Derby.

Proposed by Drs. G. N. Bartlett, John Bain, and E. Percy Court.

HARDY, HERBERT WILLIAM, M.R.C.S., L.R.C.P.Eng., D.P.H.Oxon., Brentwood Mental Hospital, Essex; 57, Carver Road, S.E. 24.

Proposed by Drs. J. Shaw Bolton, W. Robinson, and G. W. Slater.

CRAIG, ALEXANDER, M.B., Ch.B.Aberd., Second Assistant Physician, Royal Mental Hospital, Aberdeen.

Proposed by Drs. R. Dods Brown, J. S. Annandale, and Wm. M. Buchanan.

SAMUEL, EDWARD JEFFREY, M.B., B.S.Lond., Senior Assistant Medical Officer, Peckham House Mental Hospital, Peckham, S.E. 15.

Proposed by Drs. F. R. King, Noel Sergeant, and R. Worth.

PAPER.

"Twenty-eight Years' Lunacy Experience in Egypt," by Dr. John Warnock. This paper was listened to with great attention, and will appear in extended form with illustrations in the April, July and October numbers of the Journal.

SCOTTISH DIVISION.

A SPECIAL MEETING of the Scottish Division of the Medico-Psychological Association was held in the Royal College of Physicians, Queen Street, Edinburgh, on Thursday, February 7, 1924.

Prof. G. M. Robertson occupied the Chair.

Before taking up the ordinary business of the meeting the Chairman referred to the great loss which the Association had sustained through the death of Dr. Alfred Miller, Registrar since 1902. He spoke of the enormous amount of work which Dr. Miller's official duties involved—work performed unostentatiously, and with conspicuous energy, wisdom and tact. They would long cherish the memory of one who had long given of his best in the interests of the Association, and whose many fine personal qualities attracted all with whom he came in contact. He proposed that a vote of condolence be sent from the Division to the relatives, and the resolution was passed by members rising in their places.

The minutes of last Divisional Meeting were read and approved, and the Chairman was authorized to sign them.

The SECRETARY submitted letters of acknowledgment from Mrs. Ford Robertson

and family, and from Dr. T. R. C. Spence, thanking the members of the Division for their kind letters of sympathy.

The Secretary intimated that, through the courtesy of Dr. D. K. Henderson and his Board of Directors, the Spring Meeting would take place at Gartnavel. He explained that the date originally fixed—March 21—left little time for Dr. Henderson to prepare adequately for the clinical part of the meeting. It was unanimously agreed, subject to the consent of the President, to postpone the Spring Meeting of the Division to Friday, May 2, 1924.

The Secretary made a statement summarizing the steps which had been taken in England and Scotland in an endeavour to avoid the duplication of examinations for mental nurses, consequent on the institution of independent examinations in mental nursing by the General Nursing Councils. He submitted a letter, dated January 21, from the Registrar of the General Nursing Council for Scotland, suggesting a conference between representatives of that Council and of the Scottish Division, to consider questions arising in regard to the Council's examination for mental nurses. As a result this special meeting had been called to deal with the matter, and a reply had been sent to the Registrar of the General Nursing Council, informing him that the decision of the Division would be communicated at an early date.

The CHAIRMAN (who had been one of the Association's representatives at a conference in England, similar to that proposed, except that the Board of Control had been invited to attend, and that the conference had been convened by the Minister of Health for the purpose of endeavouring to avoid the holding of similar examinations for mental nurses by two bodies), gave an account of the proceedings at the English conference, and reviewed the whole position in regard to the training and examination of mental nurses.

A very full discussion ensued, during which regret was expressed that the General Board of Control would not be represented.

It was finally unanimously resolved to welcome the opportunity of a conference with the General Nursing Council in Scotland, to endeavour to avert the holding of duplicate examinations on the same Syllabus of training for Mental Nurses, and it was remitted to the Chairman and Secretary to draw up a reply to the Registrar of the General Nursing Council on these lines.

The following six representatives were nominated to represent the Division with powers: Prof. G. M. Robertson, Dr. D. K. Henderson, Dr. R. B. Campbell, Dr. T. C. Mackenzie, Dr. Donald Ross, and the Divisional Secretary.

It was pointed out that any decisions come to would require to be submitted to the whole Association, and the Secretary was instructed to endeavour to arrange the conference before the quarterly meeting of the Association.

A vote of thanks to the Chairman for presiding terminated the business of the meeting.

POST-GRADUATE STUDY IN PSYCHOLOGICAL MEDICINE.

THE President of the Association has addressed the following communication to those Universities and Medical Schools who have not yet established a course in Psychological Medicine:

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

11, CHANDOS STREET,
CAVENDISH SQUARE,
LONDON, W. 1;
January, 1924.

SIR,—The President of the Medico-Psychological Association of Great Britain and Ireland in 1910 addressed a letter to all Universities and other examining bodies, urging the necessity for facilities being provided for post-graduate teaching in psychological medicine at all medical schools, and for the granting of a special diploma to candidates after examination, as had already been done with such conspicuous success in public health and tropical medicine.

Mainly as the outcome of that letter, diplomas in psychological medicine, or psychiatry, have been created at the Universities of Manchester, Edinburgh, Durham, Cambridge and London, and by the Conjoint Board of the Colleges of

Physicians and Surgeons of London ; the University of Leeds had already moved in the matter. Notwithstanding the grave dislocation of educational work which occurred by reason of the war, definite progress has been made in the better systematic and scientific training and teaching of medical officers serving in mental institutions and others engaged elsewhere in psychological medicine. Much, however, remains to be done before psychiatry as a branch of medicine can be considered to be in a satisfactory position, and, for their mutual benefit, properly affiliated to other departments of medicine ; nor has the time come when it can be said that psychiatry has had adequate opportunity of making full use of those modern methods of research which have resulted in such noteworthy advances in general medicine. Thus, psychiatry, though its renaissance during the past half century has been in many respects remarkable, still occupies a position of isolation : not until every centre of medical teaching has adequate facilities for tuition in psychological medicine in the shape of a department (in- and out-door) or clinic in psychiatry, can the treatment of disorders and diseases of the mind hope to be on a level with that of the treatment of physical disorders and diseases ; not until then can psychiatry be constantly subjected to the stimulating and enlightening influences of the associated teaching of medicine in its several branches, which is so vital to progress ; not until then will there be efficient teaching in psychiatry.

The linking up of the mental hospitals of the country with these clinics at teaching and clinical centres of medicine would necessarily follow as an expansion of this policy.

The Council of this Association respectfully asks that the subject-matter of this letter may receive your earnest consideration. Though fully aware that any action taken will need to be in line with the established practices and traditions of particular Universities or examining bodies, it directs me to transmit a revised scheme of post-graduate work and subjects. This it is suggested, having regard to recent developments of psychiatry and practical experiences already gained in this matter, would constitute a suitable course of study and training for a diploma in psychological medicine.

I am,

Sir,

Your obedient servant,

EDWIN GOODALL, M.D., F.R.C.P.,

President.

[Abstract from the Proceedings of the Committee on Post-Graduate Teaching and Diploma in Psychological Medicine.]

MODEL SCHEME FOR A DIPLOMA IN PSYCHOLOGICAL MEDICINE ⁽¹⁾.

1. The candidate must be already a registered medical practitioner.
2. The candidate may present himself for examination on the subjects detailed under Part I of the curriculum (see para. 4) immediately he has concluded the prescribed course of instruction, or can produce such other evidence of diligent study of the subjects to be examined upon as may be demanded. Part I must be passed save by special permission at least three months prior to entering for examination on Part II of the curriculum.
3. The candidate may not present himself for examination on the subjects detailed under Part II of the curriculum (see 4) until he has been a registered medical practitioner for not less than two years. He must, subsequently to qualification, have been in the practice of an approved mental hospital for not less than two years, or have attended for six months at a hospital, mental or general, for clinical instruction in psychological medicine, and subsequently held a resident appointment at an approved mental institution or mental wards of a general hospital for not less than six months. In both cases he must produce a certificate from a recognized source that he can apply his theoretical knowledge, and has practical acquaintance with, and is well and adequately versed in, the current clinical methods of examination and treatment of nervous and mental disorders. In the case of mental deficiency the certificate should include a practical knowledge of the various intelligence tests and other methods of ascertaining the degree of

⁽¹⁾ Members will be gratified to hear that this scheme has been adopted by the Royal College of Physicians of Ireland.

mental defect. He must also produce evidence of having attended, subsequently to qualification, courses of lectures, demonstrations or other evidence of diligent study of the subjects upon which he presents himself for Part II of the examination, as may be demanded.

4. *Curriculum* :

PART I: (a) Anatomy, histology and physiology of the nervous system, including the autonomic system. Anatomy and physiology of the endocrine glands. Chemistry and cytology of the cerebro-spinal fluid.

(b) Psychology, systematic and experimental.

PART II: (a) Morbid anatomy, histology and pathology of the systems mentioned under Part I (a). *Post-mortem* and laboratory technique.

(b) Neurology and clinical neurology.

(c) Psychiatry (including the psycho-neuroses), clinical psychiatry and the medico-legal relationships of mental disorders and mental deficiency.

In addition, the candidate for Part II will need to show special knowledge of any one subject, to be selected by him from the subjects comprising Part I or Part II, or may choose to be examined in any one of the following subjects :

(d) Mental deficiency and the mental disorders of childhood and adolescence, and the duties of school medical officers in relation thereto.

(e) Bacteriology as applied to mental and nervous disease.

(f) Psycho-pathology and psycho-therapy.

(g) The principles of diet, vitamins, and basal metabolism, and their application.

(h) Eugenics, and vital statistics.

(i) Criminology and the jurisprudence of criminal responsibility.

5. The diploma, by request, may be endorsed that special knowledge has been shown in the subject selected.

6. It is suggested that any compulsory attendance at lectures and demonstrations and clinical courses should be limited to the subjects detailed for Part II, and that the course for Part I or Part II should not exceed eight weeks.

C. HUBERT BOND,
Chairman.

JOHN R. LORD,
Hon. Secretary.

October, 1923.

THE BOARD OF CONTROL (ENGLAND AND WALES) AND THE
MALARIAL TREATMENT OF GENERAL PARALYSIS.

THE BOARD OF CONTROL,
66, VICTORIA STREET.
S.W. 1;

February 27, 1924.

SIR,—You are doubtless aware that during the past year the Board has had under consideration the clinical trials which are being made in some mental hospitals in England and Scotland of the method of treating general paralysis by inducing attacks of inoculated malaria. The trials have the approval of the Board; some of them have, indeed, been made at their suggestion, and their progress and results are being observed with great interest. Since July, 1923, the Ministry of Health have collaborated with the Board in inquiring into the subject, particularly with reference to its public health aspects. It is the purpose of the present circular letter to inform you of the chief results of this joint consideration and inquiry, and to state the rules based upon them which in the opinion of the Board should now be followed in mental hospitals where the treatment is or will be applied.

The results of the inquiry have shown in the first place that there are differences, some of them important, between the procedure adopted for carrying out the treatment in England and Wales and the procedure which it is understood has been usually recommended by the initiators of this therapeutic measure in Austria, and that there are also differences of procedure among even the few hospitals

where trials are being made in England and Wales. It is not proposed to detail these differences in the present letter, but in view of the Board's desire to obtain as soon as possible a considered decision on the merits of the measure in this country, it is important to secure uniformity of procedure and practice in all the hospitals where trials are being arranged. Next, it has to be recorded that in some instances the induced malaria in the inoculated cases in England has been of an unusually severe type, accompanied by pronounced complications and with a tendency to fatality. When the trials were begun it was thought that inoculated malaria might differ in important respects from the naturally contracted disease, and that in particular the cases would be of very mild type, that no relapses would follow their treatment, and that the parasites in the blood of the patients would be too scanty to cause infection of mosquitoes before treatment was begun. It has been found, however, that no essential difference can be detected between the cases of induced malaria in this country and somewhat severe cases of the naturally contracted disease as it occurs in the tropics. It is believed that as regards one strain of the parasite ("benign tertian") which has been particularly studied, its severity is a consequence in part of the original tropical source from which it was derived, and in part of an increased activity and virulence resulting from its cultivation by direct passage through many human hosts.

It is hoped that a strain of parasites which is free from objection on grounds of severity will be available shortly, but in any case the Board are advised that it is practicable to prevent the occurrence of untoward symptoms and complications by arranging that the blood of all inoculated patients shall be examined daily with a view to indicate when it may be necessary or advisable to cut short or to modify the course of the infection by treating the patient with quinine. It has been ascertained that in patients suffering from general paralysis, clinical symptoms and signs are not a sufficient or satisfactory guide for arriving at this important decision. In a few cases, which have been studied from the beginning of the malarial attacks, the onset of severe complications was not apparent clinically, but was observed to be preceded by a phenomenal increase of parasites and the appearance of other marked pathological changes in the peripheral blood, which indicated clearly that, to ensure timely treatment, expert blood examination at least daily is a necessary procedure during the period of the malarial course. This procedure is also required in connection with the risk, to which Prof. Mühlens of Hamburg has recently drawn attention, of unwittingly conveying a mixed infection of benign and malignant parasites from donors of blood who contract their malaria in the tropics. A translation of Prof. Mühlens' article is enclosed as an appendix to this letter.

The next most important result to be noted is that the investigation carried out by the Ministry of Health has shown that the common malaria-carrying mosquito of England (*Anopheles maculipennis*), after sucking blood from inoculated patients, readily becomes infected and capable of spreading malaria to other patients and to the general public. You are aware that this mosquito is distributed practically everywhere in England. It is active, and to be found in all stages of its life-history during the months of May to October, but during the winter months only the adult female insects remain alive. They have been found during those months in a relatively inactive sluggish condition (so-called hibernating condition), in the stables and cowsheds of the farms attached to many mental hospitals situated in rural districts of the country. From November until the end of March, on account of the inactivity of the mosquito and the low atmospheric temperature, the risk of spreading malaria is negligible, but during the rest of the year, adequate measures to prevent the risk are considered to be essential. They consist in providing that all inoculated patients shall be kept in a mosquito-proof ward or under satisfactory mosquito curtains, from the onset of the malarial attacks until careful microscopical blood examination shall have proved that the blood is free from the sexual forms of the parasite which are infective to mosquitoes. This will usually be the case about three days after commencing a proper course of quinine treatment.

In connection with the same risk, careful consideration has been given to the question whether or not patients who have undergone a course of treatment with inoculated malaria are liable to suffer subsequently from malarial relapses. In both Austria and England the opinion has been published that an entire absence of relapses is a particular feature of inoculated malaria.

While this may be true as regards the cases hitherto observed in Austria, where

the strain of parasite used for the original inoculations was of mild European indigenous type, and where quinine dosage is in accordance with tropical practice, the present inquiry has shown that the opinion does not always hold good for cases in England, where the strains of parasite hitherto used were originally derived from the tropics, and where in some instances treatment has been with only small doses of quinine. In these instances what are technically known as "parasitic relapses" have been detected by examination of the blood of patients some weeks after apparent clinical recovery. It is considered that, if patients who are liable to these relapses were discharged to their homes in certain areas of the country, they would provide a potential source of spread of malaria to their families and neighbours. For this reason it is strongly recommended that examination of the blood of inoculated patients should continue to be made at intervals until freedom from parasites has lasted at least three weeks. It is also considered necessary that, when a patient who has undergone a course of malarial attacks is discharged from the hospital, his name and home address should be notified to the Medical Officer of Health of the district to which he is discharged.

Lastly, it is desired particularly to emphasize the importance of effective quinine treatment and "after-treatment" in the interests equally of the patients and of the public. It is necessary that the patients should be thoroughly treated with quinine, both to ensure their speedy recovery from the induced malaria, and to minimize, as far as possible, the risk that they will suffer subsequently from malarial relapses when discharged to their homes. This applies not only to cases in which the clinical course of the malaria is typical, but also to certain cases which have been reported as instances of "spontaneous recovery," for in some of the latter cases parasites have been found in the blood more than a month after observed attacks of fever had ceased. It is strongly recommended that the course of quinine treatment and "after-treatment" should be uniform in all hospitals and that it should be in accordance with usual tropical practice.

The rules which are recommended for adoption in connection with the new line of treatment may now be summarized as follows:

(1) The hospital should be adequately equipped with laboratory facilities for systematic blood examinations, which, as regards all inoculated patients, should be made daily from the date of onset of the first febrile attack.

(2) The medical officer or laboratory assistant, who makes the microscopic blood examinations, should be well qualified in this branch of laboratory work.

(3) The patients undergoing the course of treatment should be in charge of a medical officer who is familiar with malaria in all its aspects. During the period of the course the patients should be nursed and nourished with special care, and the progress of the infection should be modified or controlled from day to day, in accordance with the laboratory findings and the clinical signs.

(4) From the 1st April until the 30th October, patients undergoing the course of treatment should be kept in a mosquito-proof ward or under satisfactory mosquito curtains during the period when parasites are present in their blood.

(5) Treatment by induced malaria should be confined to hospitals in which all the above rules are complied with.

(6) Notification of cases of inoculated malaria to the local medical officer of health under the Public Health (pneumonia, malaria, dysentery, etc.) Regulations, 1919, will not be required until the patient is discharged from the hospital, when his name and home address with an intimation that he has undergone a course of inoculated malaria should be notified to the medical officer of health of the district in which he will reside.

I am to ask that you will let me know as soon as possible, as regards your hospital:

(a) Whether this new line of treatment is being tried, and whether the above-mentioned rules are being observed.

(b) Whether it is proposed to give it a trial in accordance with these rules.

(c) Whether it is proposed to arrange for any of your cases to be transferred to another hospital for the purpose of this treatment.

I am to add that, to assist in providing facilities for compliance with rules (2) and (3), the Ministry of Health are prepared to arrange departmentally for a short practical course of instruction which a limited number of medical officers can attend. I shall be glad to know whether you desire that one of your medical

officers should take part in this course. It is advisable that the officer selected should have had some experience of pathological laboratory work.

I am, Sir,

Your obedient servant,

O. E. DICKINSON,

Secretary.

To the Medical Superintendent of each County and Borough
Mental Hospital and Registered Hospital in England and
Wales, and to
The Resident Licensee of each Licensed House.

Translation.

Enclosure to Circular.

Klinische Wochenschrift, 24 December, 1923, p. 2340.

"THE DANGERS OF THE FEVER TREATMENT OF PARALYSIS."

By Prof. Dr. P. MÜHLENS, Hamburg, from the "Institut für Schiffs- und Tropenkrankheiten" at Hamburg. (Director: Obermedizinalrat Prof. Dr. Nocht.)

Since we began our experimental treatment ⁽¹⁾ of general paralysis by the inoculation of malaria and relapsing fever, in conjunction with Weygandt and Kirschbaum in the year 1919, we have frequently pointed out the dangers of this treatment when improperly applied. I said among other things: "Malaria and relapsing fever inoculations are only admissible in well-conducted institutions free from anopheles and vermin."

Indiscriminate and free use in private practice is strongly condemned on the ground of being generally dangerous.

Inoculations of malaria blood can therefore only meet with success in hospitals. The new treatment by giving malarial fever is by no means to be entrusted to all neurological physicians as a general therapeutic measure. Whoever wishes to experiment with this cure should, if only in the interest of the patient, first make himself thoroughly familiar with the clinical symptoms and signs and the parasitology of malaria and relapsing fever, especially if there is not always at hand a specialist in these diseases to advise him.⁽²⁾

Different reports which have come to my knowledge concerning unfortunate accidents, and even some deaths which have followed malaria inoculation, induce me once more to emphasize the above remarks and the following advice:

(1) Relapsing fever and malaria inoculations, on account of danger of subsequent infection, are only permissible in hospitals which are perfectly free from lice, bugs and anopheline mosquitoes.

(2) The inoculations should only be carried out on individuals whose resisting powers are good, and whose paralysis is not of too long duration. The earlier the treatment is started the better are the prospects of success. Before inoculation of a patient it should be ascertained that he can easily take quinine.

(3) For malaria inoculation only a pure benign tertian strain should be used.

(4) The progress of blood infection should be controlled by daily expert blood tests, in order that when necessary it may be stopped in time.

(5) When it appears from these examinations that the blood infection has suddenly become very severe, quinine should immediately be given. Other signs which indicate the need for immediate control of the malaria infection are: sudden or quick decline of physical strength and decided icterus.

(6) Those treated with malaria should not be allowed to leave the institution before they have been definitely free from parasites for at least three or four weeks. Those inoculated with relapsing fever must remain at least four weeks after the last attack.

It is also to be noted that most of the malaria inoculation deaths which have come to my knowledge concerned ill-nourished elderly paralytics, or those whose infection was not continuously and expertly controlled, or were not early enough treated with quinine.

Occasionally, when treatment was begun too late, death ensued several days after quinine treatment had been commenced. I saw this happen in the case of an elderly paralytic in whom regeneration of the blood entirely failed.

Not long ago I heard from two different hospitals of several cases in which after direct inoculation from what was supposed to be a tertian patient, tropical—indeed, a mixed infection of tertian and tropical—parasites developed, of which the latter

soon¹overcame the tertian parasites and suppressed them. A chance blood test, taken by me—I regret to say the preparations reached me too late—confirmed the cause of death as that of tropical malaria. In both cases only tertian was diagnosed in the first donor of blood, and yet tropical developed as a dangerous chief infection.

The same thing occurred in a case of direct inoculation which was made from an apparently unmixed quartan case. This blood donor also came from the tropics. But we recognized the tropical infection in time, and were able to stop it easily by the administration of quinine.

These cases, in which blood donors coming from tropical malaria districts showed only tertian or quartan parasites, but in which direct inoculation of the blood into another patient revealed also the presence of tropical parasites, are exceedingly instructive. They prove at once that with the usual blood tests for diagnosis, even with thick drops, a mixed infection can easily be overlooked,⁽²⁾ but that the mixed infection becomes readily apparent when the blood is injected into another person. In one series of inoculations from the same tertian strain, most of the cases showed in the first or second passage an overwhelmingly strong infection with the tropical parasite as well as a few tertian parasites.

But in the case of one patient inoculated at the same time with the same blood, the tertian infection predominated at once. These observations are not to be taken as supporting the thesis of the unity of the malaria parasites with modifications, such as the transformation of one parasitic form into another according to climatic and individual conditions. For the change from tertian to tropical would then have occurred in a cool European climate in the month of October, and only after the direct inoculation of other patients, and even then not equally in all cases. This is contrary to all hypotheses. It is interesting that in all six cases inoculated in October in our climate, a good many crescents appeared in which, in the living preparation in the dark field, the formation of microgametes was very well observed.

We will report later on further parasitological observations made in conjunction with Kirschbaum, such as repeated demonstration of intermediate forms between tropical rings, segmenting forms and crescents, etc.; also on the tropical segmenting forms otherwise but rarely seen in the peripheral blood, and on experiments with mosquito infection.

My object to-day is simply to repeat the warning given before of the possibility of spreading by artificial transference the dangerous tropical malaria infection of paralytics, and to point out that the danger of an accidental tropical infection of malaria from persons hailing from the tropics and giving their blood for injections is always to be considered, even when in their blood only tertian or quartan parasites are observed. (Perhaps it might be possible to recognize by more minute examination in smears as well as in thick drops the tropical rings which are difficult to distinguish.) We therefore lay down the rule that, after inoculation of such a nature, the blood preparation of the inoculated patients should be daily examined by malaria specialists, and that we should use only the pure tertian strain which has been proved harmless through many passages. By observing these principles infection of this nature does not present the danger of uncontrolled tropical infection, not to mention the danger of spreading the tropical form through the parasite carrier of the disease. This course will also avoid bringing into discredit a therapeutic measure which is now reckoned the best method of treatment for general paralysis. It is, moreover, firmly established that a very high percentage of paralytics treated with malaria and relapsing fever infection have remained for years capable of work and free from relapse.

(¹) *Munch. med. Woch.*, 1920, No. 29, and *Zeit. f. Hyg. and Insec.*, 1921, No. 94, vol. i.—(²) *Neurotherapie*, 1923, Nos. 1 and 2.—(³) Compare Mühlens, *Plasmodiden*, J. A. Barth, Leipzig, 1921, p. 1487.

KING'S COLLEGE HOSPITAL, LONDON.

Dr. ROBERT HUNTER STEEN, F.R.C.P., the Medical Superintendent of the City of London Mental Hospital, Stone, has recently resigned the post of Professor of Psychological Medicine and Out-Patient Physician for Mental Diseases at King's

College Hospital, Denmark Hill. The Council of King's College (University of London) has now conferred upon him the title of Emeritus Professor of Psychological Medicine.

A TRIBUTE TO PROF. E. KRAEPELIN, OF MÜNCHEN.

PROF. E. KRAEPELIN, the great master of psychiatry, celebrates his seventieth birthday on the 15th of February, 1926. The number of those who will be great who wish to express their admiration of him on this day. Prof. Kraepelin has never valued social distinctions or wished for such; on the contrary he would be little pleased to receive them. But there exists a form which would enable us to show him our gratitude, which would give him the greatest satisfaction and at the same time would be a help to science. Kraepelin's life-work, the "Deutsche Forschungsanstalt für Psychiatrie in München" (German Institute for Psychiatric Research) is threatened with disaster owing to the fact that the foundation capital has become valueless. Our intention is to collect the capital to ensure the existence of the Institute, and to enable the Institute to erect its own house, a house in which Kraepelin and his co-workers can follow their aims, and which shall be carried on in days to come in the spirit of Kraepelin. We therefore invite you to co-operate with us, to subscribe a sum for the good work, and to induce men of the profession and relatives of mental defectives to follow your example. As it is intended to present the house as a birthday-gift and to open it on Kraepelin's seventieth birthday, we beg you to lose no time.

MÜNCHEN;

January, 1924.

Committee: E. BLEULER (Zürich), L. BOUMAN (Amsterdam-Valeriusplein), RAMON Y CAJAL (Madrid), SMITH ELY JELLIFFE (New York), C. U. ARIËNS KAPPERS (Amsterdam), SHUZO KURE (Tokio), HENRY MARCUS (Stockholm), L. MERZBACHER (Buenos Aires), AD. MEYER (Baltimore), G. MINGAZZINI (Rome), SIR FREDERICK W. MOTT (London), F. PLAUT (München), E. RÜDIN (München), W. SPIELMEYER (München).

Donations to be forwarded to Sir F. W. Mott, F.R.S., 25, Nottingham Place, or to c/o Editors, *Journal of Mental Science*, Horton House, Epsom.

MEDICO-PSYCHOLOGICAL ASSOCIATION LIBRARY.

THE Library Committee are grateful to Dr. R. H. Cole for the presentation of his text-book on *Mental Diseases*.

The following books have been purchased and can now be obtained:

Problems in Dynamic Psychology. John T. MacCurdy. 1923.

Remembering and Forgetting. T. H. Pear.

Conflict and Dream. W. H. R. Rivers.

Benign Stupors. August Hoch.

Psychopathology. Edward J. Kempf.

Internal Secretions. Pantou.

Functions of the Frontal Lobes. Bianchi.

Lunacy. Archbold.

Psychological Types. Jung.

Endocrine Diseases. William Falta.

February 22, 1924.

CORRESPONDENCE.

To the Editors of THE JOURNAL OF MENTAL SCIENCE.

CHRONIC SEPSIS AND EPILEPSY.

GENTLEMEN,—With reference to Dr. Henry A. Cotton's paper published in October last, may I respectfully beg to point out that in the majority of epileptic cases as well as those of the so-called functional mental disorders a state of chronic sepsis is found. Invariably there is chronic muco-membranous colitis, the

faeces (from observation of specimens after irrigation) only passing through a small centre channel in the colon with complete stagnation at the bowel wall. This residue becomes the foci of coli poisoning affecting not only the solitary follicles and Peyer's patches, but also the splanchnic nerves, so that matters are made worse by decreased peristalsis.

Granted that there is an "explosive" type of cell in the brain cortex, I have concluded that the chronic sepsis may be the actual stimulus of an epileptic seizure. Therefore will colotomy or an equivalent operation to wash out the colon thoroughly not only greatly improve the mental condition of the patient, but practically eliminate the seizures also?

Personally I have found great improvement and very good results obtained by systematic irrigation of the colon—starting with single irrigations daily for the first week of saline fluid (1 drm. to a pint at a temperature of 100° F.), 3½ to 4 pints, after double irrigation at an interval of half-an-hour between—together with colon vaccines, thyroid extract, abdominal massage, and suitable dieting, "no red wines or red meat, etc.," at the same time with similar attention to the teeth and stomach outlined by Dr. Henry A. Cotton.

I have the honour to remain, Gentlemen,

St. Ann's Asylum,
Trinidad;
March 24, 1924.

Your obedient servant,
HENRY WEATON.

OBITUARY.

CHARLES KIRK CLARKE, M.D.

Formerly Superintendent of the Toronto General Hospital, and Dean of the Faculty of Medicine.

We regret to report that Dr. C. K. Clarke passed away on January 20, 1924. Admittedly one of the greatest authorities on the therapeutics of insanity, he was a scholar from whose wells of knowledge it was the privilege of thousands to drink, and his death will create a loss in the medical and scientific world that will be mourned, not only in Canada, but in other countries, where his name was well known.

He had been ill with heart trouble since October and his death had been expected. The end came suddenly at 10.30 in the morning at his home.

No name stands out more illustriously in the history of the therapeutics of insanity in Canada than that of Dr. C. K. Clarke, who at the time of his death was Consultant in Psychiatry at the Toronto General Hospital. A man of many-sided activities, who vigorously pursued many lines of science and culture, he was specially recognized as one of the leading psychiatrists of the world. As a Medical Director of the Canadian National Committee for Mental Hygiene since June, 1918, Dr. Clarke visited every province in the Dominion for the purpose of improving conditions for the treatment and control of patients suffering from mental diseases. His works on insanity were accepted as standards.

Dr. Clarke was also well known as an expert alienist, an educational reformer, a naturalist, a musical amateur, a versifier, and an apostle of the outdoor. He was an authority on birds, and was President of the Bird Society of Ontario. As an authority on early Canadian literature or Canadiana, he made one of the finest collections in the country. He was a musician all his life. For many years he was a member of a string quartet of distinguished artists in Toronto, who played once a week, year in and year out. He was a keen participant in, and a follower of athletics throughout his life, and two of his sons were the most outstanding hockey players of the day.

When young Clarke entered the "Provincial Lunatic Asylum" as Clinical Assistant to Dr. Workman in 1874, psychiatry was practically an untrodden field. Dr. Workman, Superintendent at that time, was himself a pioneer in psychiatry, and had initiated radical reforms in the management and treatment of the insane. In order to appreciate the advance which has taken place in psychiatry since that date, the traditional function, both of asylums for the insane and their superintendents, must be recalled. Restraint of the insane was generally practised.

Every asylum had its barred and padded cells, straight jackets and fetters for the maniacal. Superintendents were custodians only; attendants were chosen for strength and not intelligence; the physical care of the inmates was the chief end. There was no attempt at diagnosis or classification of the insane, or scientific research into mental diseases.

It was at the Rockwood Asylum, Kingston, that Dr. Clarke made his revolutionary advances. For over twenty years he had the opportunity to carry out his scientific theories and humanitarian ideals in the treatment of the insane, and he made full use of it. When he took charge, Rockwood was a species of lock-up for mad criminals. Dr. Medcalfe, the Superintendent who preceded him, had been imbued with the spirit of reform, but was killed by a patient before this had taken concrete form. Dr. Clarke, who was then his assistant, only escaped a similar fate through his superior strength and agility.

He was on the wharf in the asylum grounds when a big, husky, violent patient threw his arms around him, pushed him into the water, and kept him pinioned for some time. It was only because the doctor was a marvellous swimmer and a man of unusual strength and resource that he was able to free himself and master the maniac.

Under his charge Rockwood became the great centre in Ontario for reforms in the nature of developing the hospital idea of asylums for the insane, and in introducing non-restraint and employment for patients. Here he established the first training school in America for nurses of the insane, thus radically raising the standard of his own staff and those of all other similar hospitals. He employed the modern continental method of classification of the insane, recognizing the many forms of the disease, and bringing its treatment to the level of therapeutics in other diseases. In this way he contributed to lifting the stigma of ages from madness. He was an indefatigable pioneer in laboratory work in insanity. His work in occupational therapy at Rockwood was of such an outstanding character that it attracted students from all over the world.

Dr. Clarke always maintained that the legal attitude towards insanity was unfair and wrong, and he was one of the pioneers of the humane idea that has now begun to take real hold of real people—that the legal definition of insanity (not to be able to distinguish between right and wrong) does not include the vast majority of the insane, and even of the insane who become criminals.

An interesting demonstration that Dr. Clarke conducted at Rockwood Asylum is worth recording. He invited half-a-dozen professors from Queen's University to be his guests, and to meet half-a-dozen of his worst patients, concealing the fact that they were patients of the institution. These patients had been members of learned professions, and for an hour the Queen's professors were amazed at their mental agility and their interesting conversation. They wondered how it was that such distinguished men could be in Kingston at all and they had not heard about them. Then the doctor took them into another room and said: "What would you say if I told you those were my patients and that I have them here for treatment at the asylum?" They replied that they considered he was absolutely unjustified in keeping six such brilliant men in custody. Then the doctor called the men back, and, addressing one, said: "John, who are you?" John replied that he was Atlas, the man who balanced the world on his shoulders. Another declared himself the Emperor of India, and so on. Although insane, these men would pass as sane men under ordinary legal tests.

Charles Kirk Clarke, M.B., M.D., LL.D., son of Hon. Lieut.-Col. Charles Clarke and Emma (Kent) Clarke, was born at Elora, Ontario, February 16, 1857. He received his early education at Elora Grammar School, and subsequently went to the University of Toronto, where he graduated as M.B. in 1878, and as M.D. in 1879. He received the honorary degree of LL.D. from Queen's University, Kingston, in 1906.

Dr. Clarke began his medical career under the tutelage of Joseph Workman, M.D. He was a Clinical Assistant at Toronto Hospital for the Insane from 1874 to 1878; Assistant Physician of the same institution from 1878 to 1879; Assistant Superintendent for Hamilton Hospital for the Insane 1879-1881; Assistant Superintendent of Rockwood Hospital for the Insane, Kingston 1885-1905; Superintendent of Toronto Hospital for the Insane, 1905-1911; Medical Superintendent, Toronto General Hospital, 1911-1918. He was instrumental in establishing the first nurses' training school in connection with the Hospital for the Insane,

Kingston (one of the first seven in America), in 1887. He developed many methods of occupation for patients; established non-restraint, and had convalescent homes and outdoor treatment of cases of tuberculosis put into existence. He was Professor of Psychiatry in Queen's University until he came to Toronto.

Dr. Clarke became Professor of Psychiatry at the University of Toronto in 1907. He was Dean of the Medical Faculty, University of Toronto, from 1908 till 1920.

In October, 1880, Dr. Clarke married Miss Margaret De Veber Andrews, of St. Andrews, N.B., who died December, 1902. In August, 1904, he married Miss Theresa Gallagher.

Dr. Clarke was appointed a Royal Commissioner to investigate and report on the condition of the insane in British Columbia in 1901, and a Royal Commissioner to investigate and report on methods of treatment of the insane in Europe in 1907. He was Vice-President of the Canadian Hospital Association, 1907-1908, and a medical director of the Canadian National Committee for Mental Hygiene since 1918.

Dr. Clarke was an Anglican. He was a member of York, Rosedale Golf, Western Golf and University Clubs. His chief recreations were golf, music and ornithology. He published many brochures on psychiatric and medico-legal subjects, and also many articles on ornithology. He was editor of the *University of Toronto Medical Bulletin*, one of the editors of the *American Journal of Insanity*, and also of the *Canadian Journal of Mental Hygiene*.

Dr. Clarke was signally honoured by receiving an invitation to deliver the Maudsley Lecture on Psychiatry at the Congress of the British Medico-Psychological Association in London, England, in May, 1923.

Dr. Clarke was especially interested in young men and he had a great record for starting them on their way to distinguished careers. As Dean of the Medical Faculty of the University of Toronto he was a tremendous favourite among the students.

Dr. Clarke was a wonder in the use of his hands. He made a violin, a pipe organ, a sail boat, a launch, and he built a house. In fact he was always constructing something. He delighted to spend the summer at his place on Mackie's Lake, one of the most out-of-the-way places in Canada. He had a unique knowledge of the habits of wild game, fish, etc., and could catch fish when no one else could. He was a keen student of the nature of anything that ever grew or lived, and collected many valuable and previously unknown specimens of fish for the Biological Department of the Ontario Museum. His displays of birds' nests and eggs at the Museum were accounted some of the rarities in the country. Perhaps the most unique of all his pursuits was his authorship of the *Lays and Legends of Mackie's Lake*.

Although Dr. Clarke was engaged in work that was naturally oft-times depressing he had the advantage of possessing a keen sense of humour.

Dr. Clarke had a genuine affection for his mental patients. During walks to the Toronto hospitals he would be continually stopped by ex-patients of mental hospitals. His "circle of friends" was the most remarkable in the country, because he really liked them. He always insisted, until recently, that those who did his housework or waited upon him should be mental patients.

One of the outstanding features of his professional career was the rapidity with which he could make a diagnosis of a mental case. Those who were not closely associated with him felt that his examinations were sometimes perfunctory because of the speedy manner in which they were conducted. Yet the accuracy of his diagnoses was remarkable. Oftentimes a patient suffering from general paralysis of the insane in the early stages, and who had been observed by the most eminent men of the province and not diagnosed, had been stopped by Dr. Clarke as he was walking to his chair in the clinic room. With marvellous facility his keen, perceptive mind would penetrate the man's mental content and enable him to mention things that were worrying the man. This ability is explained entirely by the utilization of the experience of fifty years in psychiatry.

A leading psychiatrist of America, when informed of the movement to celebrate Dr. Clarke's fiftieth anniversary in psychiatry (January, 1924), wrote:

"Dr. Clarke holds a unique position in Canadian psychiatry. Whilst he himself is very modest in tracing his own achievements to the influence and training he received from his predecessors and masters, we all know that the forward things he has accomplished are owing to his own foresight and to his spontaneous enthu-

siasm and tireless energy operating in a mind imbued with wholesome philanthropy and patriotism."

Dr. Clarke was always fearless in expressing his convictions, and was responsible more than any other man for raising the level of asylums to the scientific standard of hospitals for the care of the insane. No man in the country gave more evidence on the mental status of murderers. He was called by the Crown in no less than 60 murder trials in Canada. He had a humanizing influence in connection with the administration of justice. His chief concern was the safety of society, but he was anxious to couple with that the treatment of the criminal according to his individual requirements. He held it to be a crime in itself to hold an irresponsible man responsible when he did not inherently possess powers of self-control.

His warning in connection with the case of Leo Rogers of North Bay will be long remembered. His correspondence and material in that case would fill an ordinary drawer. He kept in communication with Rogers for a number of years, and was greatly chagrined at the manner in which the case was dealt with by the authorities.

He had his own way in dealing with lawyers who possessed no understanding of psychiatry, but who attempted to heckle him. On one occasion a counsel asked him many foolish questions and tried to pin him down to a definition of insanity. The doctor at last retorted: "Well, in the absence of a better definition, I would say that insanity is the asking of foolish questions." He had no more trouble with that counsel.

[Abstract from *The Toronto Daily Star*, Monday, January 21, 1924.]

HONOUR.

JOHN WARNOCK, C.M.G., M.D.Edin.: Order of the Nile, Second Class, by the King of Egypt.

NOTICES OF MEETINGS.

Quarterly Meeting.—May 22, 1924, at 11, Chandos Street, Cavendish Square, W.1.

South-Eastern Division.—April 30, 1924, at the Kent County Mental Hospital, Maidstone.

South-Western Division.—April 24, 1924, at the Monmouth County Mental Hospital, Abergavenny.

Northern and Midland Division.—April 24, 1924, at the County Mental Hospital, Prestwich.

Scottish Division.—May 2, 1924, at the Glasgow Royal Mental Hospital.

Irish Division.—April 24, 1924, at the Central Criminal Asylum, Dundrum, Co. Dublin.

APPOINTMENT.

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JOURNAL OF MENTAL SCIENCE.

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JULY, 1924.

THE JOURNAL
OF
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EDITORS

J. R. Lord, C.B.E., M.B. Henry Devine, O.B.E., M.D.
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The following Mental Hospital Reports for 1923-24 have been received :

Bristol City.
Cumberland and Westmoreland County.
Down District.
Glasgow Royal.
Middlesborough.
Plymouth Borough.
The Lawn.
Worcester, Powick.

Also the following Reports and Reprints :

The First Report of the Inspectors of Lunatics (Northern Ireland), 1924.
Inspector-General of Mental Hospitals' Report, New South Wales, 1923.
Victoria, 1922.
Annual Report : Museum of the Royal College of Surgeons, England, 1924.
On Paramnesia. Reprints from 'Mind,' by *A. Wohlgemuth*.
La Psychanalyse, les Medecins et le Public, by *Dr. Henry F. Cournoy*.
Delive d'interpretation au debut. Reprint from the 'Archiv. Suisses de
Neur. et de Psychiat.,' by *Dr. Henry F. Cournoy*.
Hallucinations Lilliputiennes, etc., by *Dr. Henry F. Cournoy*.
Improvements in Colorimetry. Reprint from the 'Biochemical Journal,' by
Dr. R. V. Stanford.
Quickness and Intelligence (Monograph), by *Dr. E. Bernstein*.
Primitive Archaic Forms of Inner Experience, etc., by *Dr. A. Storch*.

Books for Review :

Common Symptoms of an Unsound Mind, by *Dr. G. Rutherford Jeffrey*.
The Law relating to Lunacy, by *Sir Henry Studdy Theobald, K.C., M.A.*
The Social Control of the Feeble-minded, by *S. P. Davies*.

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THE JOURNAL OF MENTAL SCIENCE

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No. 290 [NEW SERIES
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JULY, 1924.

VOL. LXX.

Part I.—Original Articles.

The Fifth Maudsley Lecture: Some Sociological Considerations bearing upon the Occurrence, Prevention and Treatment of Mental Disorders. Delivered by JOHN CARSWELL, F.R.F.P.&S. Glasg., at the Quarterly Meeting of the Medico-Psychological Association of Great Britain and Ireland, held at the House of the Royal Society of Medicine on Thursday, May 22, 1924.

To be sure of one thing, when you are perplexed about the main issue, sometimes leads one to the right solution.

Of this I am sure, that what may be expected of my contribution as Maudsley Lecturer I am unable to attain. Falling back, as I propose to do, upon work done in Glasgow, I fortify myself at once with a quotation from Maudsley :

"Tiresome," he said, "as the minute man of observation may sometimes seem as he exults over his scattered facts, as if they were final, and magnifies his molecules into mountains, as if they were eternal, it is well that he should thus enthusiastically esteem his work ; and no one but will give a patient attention as he reflects how indispensable the humblest unit is in the social organism, and how excellent a spur vanity is to industry." Maudsley might have reserved the last humorous thrust, but it is too characteristic of the man to be omitted, and therefore I give it as it was written. If vanity, to any extent, sustained me during arduous years of plodding industry, I can assure you that my available stock of that vice is now quite unequal to provide a shelter from the feelings of gratitude and the sense of inadequacy that surged upon me when out of your kindness you called me to be Maudsley Lecturer.

Scotland, the recognition of whose workers in the field of psychology was, I am well aware, the chief motive in your choice of Maudsley Lecturer this year, has some claim to have the history of its lunacy administration surveyed at a time when public attention is directed to the problem of lunacy reform.

Maudsley had a moral test for scientific workers : to paraphrase his words, "Work," he would say to them, "in the full conviction that the day must come when the results of your labours shall no longer be necessary, for on that day some genius will arise who will

make use of your results to proclaim a great generalization, and prepare the way for a fresh advance." The history of the workers in our field of labour stands that test well, and the little vanities that doubtless, as Maudsley suggested, attached to each of them, do not mar the effect of their solid achievements. Dr. W. A. F. Browne early drew attention to the need for reform in a series of lectures on "asylums as they are and as they ought to be," couched in terms hardly less eloquent than those we are still happily privileged to hear from the lips of his son, the first Maudsley Lecturer, Sir James Crichton Browne. The work of Skae, Laycock, Clouston, and now of our popular and ubiquitous friend, Prof. Robertson, whose urbanity disarms all criticism of his manifold activities, constitute a record unexampled elsewhere, so far as I know, of the great intellectual qualities and the public spirit that have been at the service of Edinburgh University and Morningside Asylum for more than three generations. The freedom from restraint, and provision for open-air life of patients in modern asylums, is in no small measure due to the courage and the initiative of James Rutherford. Indeed, it may be said that courage was the quality that more than any other characterized these men. The sound principles which they elaborated and applied needed courage, for in this branch of medicine convention cannot be lightly regarded because the public are, not without some degree of reason, disposed to regard any departure from it as a menace to security. In this spirit Arthur Mitchell secured the establishment of the boarding-out system for chronic harmless patients; and the General Board of Control have generated in Scottish lunacy administration a spirit of open-mindedness towards new methods and fresh ideas that has justified in the public interest a certain attitude of ease, if not sometimes of sheer indifference to a rigidly legal view of their functions.

Encouraged by the existence of this spirit in official circles I put forward certain proposals for setting up machinery in the Barony Parish of Glasgow for placing the certification of alleged insane persons in the charge of one responsible medical officer, and securing provision for the treatment of suitable cases, without certification, in observation wards. The scheme was approved by the General Board of Lunacy and the Local Government Board, and was duly put into operation. It was not, however, until after the amalgamation of the Barony and the City Parishes of Glasgow that the scheme came into full operation. The year 1901 marks the first full year of the reconstituted parochial area, and the year 1904 saw the opening of the Eastern District Hospital, to which was attached a pavilion containing fifty beds for the treatment of mental cases, not under lunacy certificate.

It is necessary to add, by way of explanation, that the Parish of Glasgow, with a population of about 600,000, is also the Lunacy District, and that the Parish Council as such administers the Poor Law, and as District Board of Control, it provides and controls asylum accommodation and treatment. There is therefore no conflict of interest and no official overlapping.

There was thus one certifying physician who visited all the reported cases of insanity, and who was in the position to do the best possible for the patients by the offer, in suitable cases, of probationary treatment on a purely voluntary and completely unrestricted basis, alike as regards any stipulation as to a fixed period of voluntary residence, or money payment. There was no power of compulsory detention. The patient was as free as patients in a general hospital, but we were not free to treat a patient for longer than six weeks without the sanction of the Local Government Board.

It may be useful that I should state in passing that the wards were administered as an integral part of a general hospital. The Matron of the whole hospital was responsible for the nursing staff, and it is worthy of note that the matron, the assistant matron, the night superintendent, the female charge nurse, and each member of the male staff of nurses held the certificate for mental nursing of the Medico-Psychological Association. All the probationer nurses of the hospital had at least three months' training in the mental wards.

Primarily, as has been indicated, the scheme was designed to secure that no one should be placed under lunacy certificate who could be treated successfully otherwise.

But there was another purpose also in view. No provision existed, nor indeed to this day exists anywhere else, to ascertain by systematic official investigation the origin and sources of registered lunacy, particularly in relation to local economic and social conditions. Lunacy differs from all other diseases in this respect—that it does not figure in the Registrar-General's returns as a cause of death, except in the most casual and fragmentary way. When however a person becomes a registered lunatic for the first time, the fact is noted in the returns of the General Board of Control. To that extent, therefore, the *occurrence* of insanity can be traced.

It needs no argument in support of the view that the local occurrence of insanity, systematically recorded and related to the occurrence of other diseases, would form a useful addition to our knowledge of insanity and stimulate provision for its earlier treatment. It does seem strange that until a patient appears at the door of an asylum, the prolonged pathological process, that has at

that stage reached the point when legal certification has become necessary, is ignored so far as public provision goes for the prevention of this calamity or the treatment of the all-important early stages of this malady.

The figures now presented refer only to first attacks (as far as could be ascertained), all cases previously under certificate having been eliminated. Also let us note that the figures relate entirely to rate-aided patients.

The first table presents the number of *persons* placed under lunacy certificate during each year from 1901-13, and the proportion per 10,000 of the population.

TABLE I.—*First Attacks of Insanity during each year 1901-1913 and Proportion per 10,000 of Population.*

Year.	Number of persons placed under lunacy certificates for first time (occurring insanity).	Proportion of occurring insanity per 10,000 of population.
1901	371	6.5
1902	406	7.0
1903	387	6.6
1904	380	6.3
1905	422	6.9
1906	364	5.9
1907	424	6.7
1908	440	6.9
1909	441	6.8
1910	392	5.6
1911	443	7.7
1912	422	7.3
1913	376	6.5

Put briefly it amounts to this: that while the year 1906 shows a minimum of 364 persons who became insane, and 1911 shows a maximum of 443, yet the variation from year to year is small, and this small degree of variation is emphasized when we look at the proportion per 10,000 of population, which fluctuates but little around an annual average rate of 6.5 per 10,000.

As subsequent figures do not deal with cases under 15 years, this element now disappears.

It is clear, however, that these figures fail to reveal many facts related to the occurrence of insanity.

The method adopted towards their elucidation was to divide the cases into, first, those occurring at ages 15-45, and second, those occurring at ages over 45. No attempt was made to investigate the occurrence of idiocy and imbecility among children, because it

was known that many such children were not reported to the public authorities during school age, and a considerable number were dealt with by the education authority in special schools.

TABLE II.—*Proportion per 10,000 of Population of First Attacks in Males and Females at ages 15-45, and at ages over 45.*

Years.	Ages 15-45.		Ages over 45.	
	Males.	Females.	Males.	Females.
1901-1905	8.5	7.9	15.9	13.2
1906-1910	8.5	7.0	20.0	15.5
1911	9.6	7.6	17.7	16.1
1912	8.1	8.8	14.0	14.8
1913	7.0	7.2	12.6	14.3

The average population at those ages was approximately :

	Males.	Females.
At ages 15-45 . . .	146,000	144,000
Over 45	44,000	50,000

This table shows that the occurrence of insanity during the active period of life 15-45, the population living at those ages being half the total population, was stable in both sexes throughout the whole period 1901-13, and that there was little or no difference between the two sexes.

These are notable facts, and should be kept in mind as we proceed.

The rate at these ages represents an annual average of 8 per 10,000.

At ages over 45, the rate varies among males between 12.6 and 20, and among females between 13.2 and 16.1.

Let us follow out those figures further, and ask—How do they adjust themselves to the associated physical conditions with which they are usually associated as ascertained causes ?

I have taken the total number of cases which occurred during the three years 1911-13. The total was 1,168 cases: and of these 259 have to be set aside as the cause was not ascertained, leaving 909 cases available. These I have placed in five groups of approximate causes.

GROUP I.—*Constitutional instability*, which includes adolescence, congenital defect, heredity, epilepsy, and the climacteric period.

GROUP II.—*Toxic*, which includes syphilis, general paralysis of the insane, alcoholism, exhaustion states, and the effects of acute bodily diseases, such as pneumonia, septicæmia, etc.

GROUP III.—*Gross brain diseases*, which include hæmorrhages, tumours, etc.

GROUP IV.—*Senile changes*, including a few cases of pre-senility.

GROUP V.—*All other causes*, which include mental stress, child-birth, etc.

This table shows the distribution of the cases under these five groups :

TALBE III.—*Five Groups of Ascertained Causes of Insanity in First Attacks during the Period 1911-1913.*

—	Ages 15-45.	Ages over 45.	Total.
GROUP I.— <i>Constitutional instability</i>	358	35	393
GROUP II.— <i>Toxic</i>	152	96	248
GROUP III.— <i>Gross organic brain disease</i>	10	51	61
GROUP IV.— <i>Senile changes</i>	—	189	189
GROUP V.— <i>All other causes</i>	15	3	18
Total	535	374	909
<i>Per cent. of total ascertained causes</i>	58·8	41·2	—

The two tables just presented show—

(1) That 67 *per cent.* of the cases occurring at ages 15-45 are based upon some constitutional morbid process, and that this is also the most constant element in the annual production of insanity at those ages. Variations in the annual production rate at those ages are probably always due to variation in the incidence of other than constitutional causes.

(2) That 43 *per cent.* of all the cases at all ages have a constitutional basis.

(3) That 27 *per cent.* of cases at all ages are caused by syphilis, alcohol, and exhaustion states.

(4) That in 50 *per cent.* of the cases at ages over 45, senility was the most prominent causative element.

(5) That all other factors in the production of insanity are practically negligible as contributory elements in the total mass of insane persons.

We are now prepared to consider how the production of insanity stands related to its occurrence in good and in bad districts, as such qualities may be supposed to attach to districts with a low death-rate and those with a high death-rate.

TABLE IV.—*Occurrence of Insanity in Two Groups of Areas: (1) with death-rate above rate for whole city, (2) with death-rate below rate for whole city.*

Group.	Population.	First attacks of insanity (1911-1913).		
		Ages 15-45.	Ages over 45.	Total.
I	199,000	186	149	335
II	198,000	165	91	256

The figures in this table give the total number of cases which occurred in the three-year period 1911-13.

Each group of areas consists of five municipal wards, with aggregate populations of 199,000 (Group 1) and 198,000 (Group 2). Each ward in Group 1 had a death-rate at or *above* the mean for the whole city, and similarly in Group 2 the death-rate of each ward was at or *below* the mean for the whole city. The death-rate for the whole city in each of the years was 16, 16, and 16·7. The highest death-rate in any of the wards in Group 1 was 22, and the lowest death-rate in Group 2 was 10.

The difference in favour of Group 2 of cases occurring at ages 15-45 (when, as we have seen, the constitutional element constitutes 67 *per cent.* of all the causes at that period of life) is only 21 cases, Group 1 having produced 186 cases and Group 2, 165 cases.

This is not a definite enough difference upon which to base any argument likely to affect the general conclusion already reached, that constitutional instability is the predominating factor in the origin of insane states during the adolescent and active period of life.

On the other hand the large number of cases which occurred at ages over 45 in Group 1 plainly points to economic and other social factors as influences which operate more powerfully in poor and unhealthy districts than in districts more favourably circumstanced.

These, then, are the general results of a careful investigation of cases of insanity during the period under review.

But an important question remains: How far did the possession of observation wards enable us to keep down the number of persons placed under lunacy certificate?

To submit, without comment, the number of cases treated in hospital without subsequent recourse to certification, and leave the suggestion that, without this valuable aid, these people would

all have become certified lunatics, would not be a fair way of putting the position, for we very soon found, what all experience teaches, that when public provision is made for any purpose, the demand increases with the supply.

The answer therefore is that many people who required treatment, but would not have reached a mental hospital as certified patients, accepted this provision for their care, and that a considerable number of persons were expedited on their way to asylum care by the provision of probationary care, which, having been given, satisfied their relatives that further care was necessary. Undoubtedly, however, large numbers of patients were treated to recovery, who, without this provision, would have had to be placed under certificate.

TABLE V.—*Admissions, Discharges and Deaths 1904-1914*
(May 15).

—				Males.	Females.	Total.
Total number of cases admitted . . .				3,487	2,923	6,410
Discharged cases :						
Recovered . . .	Males.	Females.	Total.			
Improved . . .	1,496	1,097	2,593			
Certified insane . . .	593	520	1,113			
Died . . .	1,163	1,128	2,291			
	216	163	379			
Total cases discharged and died . . .				3,468	2,908	6,376
Remaining on May 15, 1914 . . .				19	15	34

I give this table without further comment, because it would not be relevant to our present theme to discuss the classes of cases treated, without certification, and as all cases of first attacks subsequently certified and transferred to asylums are included in the figures already submitted, it is unnecessary at present to enter upon further detail.

Two elements of fundamental importance in our problem must now be noted. First, the diseases comprised under the general term "insanity" fall mainly into two categories, *viz.*, (1) those in which the biological element is all-important, and (2) those in which it is of little or no significance. Second, social and economic conditions, as they exist in this country, appear to have little effect upon the biological foundations upon which mental stability depends. A slum is not a biological product ; it is the creation entirely of adverse social and economic conditions, and it is not so surprising as at first sight it seems to be that the constitutional element in occurring

insanity shows so slight a difference in its relative prevalence in the two areas compared.

Mott's demonstration of the regressive atrophic changes in certain organs which occur in the biogenetic psychoses has probably prepared our minds to accept these fundamental conditions of our problem; and, particularly his demonstration of the absence of such changes, except as secondary to local inflammatory changes, in an acquired disease like general paralysis.

For members of the Medico-Psychological Association the figures I have presented provide no novelty. At best all I can hope is that they may be accepted as confirmatory of conclusions reached by Mott and others in the field of pathological research. I have stressed the importance of taking the whole of the age-period 15-45 rather than limiting our view to the adolescent period. This has been done with the intention of presenting the full effect of the element of constitutional instability in the production of insanity. It is difficult to resist the conclusion that the adolescent group of insanities, insanity with epilepsy, states of paranoidal dementia, paranoia, and even the so-called climacteric insanities, to which may be added some forms of so-called puerperal insanity, are in substance biogenetic psychoses. All I put forward at present is to claim, upon many pathological and clinical grounds, that the term "adolescent" should not be allowed to obscure the fact that the morbid biogenetic element extends its effective influence beyond the adolescent period, and probably accounts for all forms of insanity not due to toxic agency, gross brain lesions, and senile changes.

If this view is correct, no room is left for theories of a psychogenetic origin of insanity; at most, the psychological contribution to the study of our cases should be limited to explanations of the mechanism which the insane mind constructs as explanations of the morbid affective state.

I would not have ventured into these aspects of the subject, upon which I have, indeed, little claim to speak, did they not lie in my way as I proceed to another aspect more relevant to my purpose.

Let me remind you that over a period of thirteen years the annual rate of production of insanity at ages 15-45 gave a practically constant figure of about 8 per 10,000 of the population living at those ages, of which two-thirds were regarded as cases of biogenetic psychoses. Practically no fluctuation occurred; certainly no increase was noted. These figures give no support to the belief that the nation is carrying an increasing burden of a C3 population by reason of an increased propagation of the unfit.

I have often wondered why the advocates of what is called the eugenic movement consider it essential to their case to belittle

the achievements of sanitary science, in so far as they insist that the removal of insanitary conditions has brought a certain element of danger into present social conditions by preserving the unfit, who proceed to multiply a C3 population. I think this attitude is based upon a profound misunderstanding of the situation.

Dean Inge is reported to have said the other day, "The quality of the population depended partly on heredity and partly on environment. The importance of environment had been stressed while the influence of heredity had been neglected." The first statement is, of course, accepted by everybody, but the latter statement is inaccurate in its suggestion that the reduction of deaths from preventable disease is now recognized to have been associated with a neglect of the study of the influence of heredity upon the quality of the population. This line of comment is not new; it was introduced by Buckle, Lecky and Froude, and their apprehensions were duly answered.

It sounds strange in our ears to hear it said that men with the great scientific grasp and the philosophic outlook of William Tennant Gairdner and J. B. Russell, to mention only the two men whose work bears upon the material for this address, neglected to consider the effect of heredity upon the quality of the population. The fears of the past are re-dressed as the bogeys of to-day.

I speak with feeling. I have seen three visitations of typhus fever to the home of my boyhood, in the first of which I first looked upon death in the person of my father, stricken in early manhood, and in the last I myself was the victim. I have witnessed the daily procession of funerals through the streets of Glasgow with the same indifference with which, it is said, the inhabitants of Paris regarded the passage of the victims of the reign of terror as the tumbrils carried them to their doom. No group of youthful friends but had among them one at least whose life was doomed to premature destruction by tubercle. Gairdner and Russell changed all that.

But we are told to-day that they did not have the inestimable advantage of the results of certain recent investigations, which prove that mentally deficient parents frequently beget mentally deficient children!

I cannot separate the ethical motives from the scientific methods of the great men whose achievements as public health administrators brought unexampled blessings upon a fever- and tubercle-stricken population, and brought sunshine into the streets and homes of the common people. Both motive and method stand justified by their results, without qualification or apology. Moreover there is no other way. Are we to refuse to treat syphilis, or to save the inebriate? Did fever and tubercle kill only the unfit?

The prevention of mental diseases is even now in process of becoming a subject of systematic study. Further researches into the nature of the biogenetic psychoses will yield, we hope, helpful results. Syphilis, as it affects the central nervous system, is in a hopeful stage of study, and we look to public health administration in this matter to control, at least, the spread of this disease. Alcoholism may continue to trouble us so long as human folly is blind to self-interest, but the failures of senility will lessen as conditions of life improve and intelligent dieting and modes of living become more common.

There is no practicable short cut to the attainment of these ends. I believe, with the late Dr. J. B. Russell, "that as the expectation of life is lengthened, the *quality* of the life is improved." Let me give a quotation from Maudsley (*Organic to Human*, pp. 358-359):

"Viewing matters from a strictly biological standpoint, it no doubt looks on the face of it as if a vigorous elimination of the unfit, after the manner of bees, might be as right for a sound human as an apian hive. But there is properly a higher standpoint from which the mistake of such hasty judgment is evident.

"The sanguine hope is that although acquired characters are not inherited and the son does not benefit constitutionally by the well-doing of his father (which, considering the plasticity and educability of the human brain, is not perhaps the unqualified truth it has been boldly proclaimed to be), the steady operation of good nourishment, sane and elevating surroundings, and a right system of education, intellectual and moral, will raise human offspring everywhere to a proper mental height, and gradually raise the standard of that height."

In a word, the thesis I have been endeavouring to maintain is this:—At the present day insanity as a social phenomenon is regarded in two ways: First, there are those who argue that it is largely a produce of bad social conditions, and that the improvement of social conditions will necessarily lead to a marked improvement of the mental health of the community. On the other hand, there are those who take the diametrically opposite view. Improvement of social conditions means, they say, the preservation of the unfit, and consequently a higher production of insanity, and therefore they are not enamoured of philanthropy.

It may be conceded that the persistent and apparently constant evidence of constitutional instability in good and bad districts alike, with but little variation, creates a difficulty for the advocates of both sides, and suggests that both views may contain some element of error; yet, on ethical grounds, it seems to me, we are bound to go on with the salvage of weak lives, in the sanguine hope, as Maudsley expressed it, of attainment to a higher standard of mental health.

Mental After-Care. By HENRY RAYNER, M.D.Aberd.

MENTAL after-care, since the establishment of the Association bearing this name more than forty years ago by Mr. Hawkins the then Chaplain of Colney Hatch, has become very generally adopted in most countries.

The English Mental After-Care Association at first only dealt with women discharged recovered from asylums, but after some years men were included; still later those recovered under any form of treatment, whether in mental hospitals, Poor Law infirmaries, out-patient departments or mental clinics, etc. The care has been extended also to patients discharged on probation from mental hospitals, and a still later extension has been the making of a preliminary inquiry of the home conditions to which the patient would be going on discharge, for the information of the mental hospital authorities, the report being accompanied by suggestions in regard to the form of assistance that would be needed. In these various ways the discharge of patients has been greatly facilitated and probably hastened in many cases, whilst the danger of relapse has been very greatly reduced.

The Association had at the outset much to learn in regard to the best means of providing convalescent care, and in the modes of finding occupation and suitable employers, all of which has now become comparatively simple and routine.

In the earlier stages the help was confined to finding one suitable situation, but it was soon found that some needed more than one start in work, and now many of those helped return again and again over periods of years for sympathy, advice and help when threatened with relapse, such relapses often being avoided by obtaining medical advice or temporary convalescent-home care, sometimes provided by friends, employers, or at times from the patient's own means.

The help thus afforded has without doubt been very efficacious in preventing relapse and in conducing to the comfort and happiness of those assisted; but it by no means exhausts the possibilities of after-care, which indeed may still be considered as being in an early stage of its usefulness.

The discharges from mental hospitals are recovered mentally, but it by no means follows that they are in good bodily health or that they have been cured of habits of life, tendencies to disease or actual bodily defects or diseases, which in conjunction with mental conditions had produced the original breakdown.

The careful and thorough examination of patients in mental

hospitals discovers these causes of disorder, and the physicians must often regret that owing to the mental recovery they are debarred from prolonging the advice and treatment that would ensure a thorough cure, or at least a prolonged freedom from the danger of a recurrence. This affords an opportunity for an extension of after-care which might be met by the provision of after-care helpers to whom the patients might apply, and who, on the instruction of the mental hospital physicians, might ensure that the patients, when wishful to do so, obtained the advice and guidance of the physicians who had had such full opportunities of studying their cases. This would establish a continuity of the mental hospital advice and treatment that should have very beneficial results, especially in cases tending to frequent relapse.

This extension of the work would, of course, necessitate that the association workers should obtain some knowledge of mental disease and disorders by a special course of instruction that would fit them for giving this form of assistance. This instruction the mental hospital physicians would assuredly provide.

Mental after-care, taken in its widest sense, should include help to *all persons discharged under any conditions* from mental hospitals or who needed assistance after having been under *any form of treatment for mental disorder* elsewhere.

This would embrace many forms of assistance that the Mental After-Care Association, owing to paucity of funds, has been hitherto unable to undertake.

Epileptics, for example, cannot be helped, since they would require to be cared for in a home with opportunities of outdoor employment, such as is provided by epileptic colonies (from which mental cases are excluded). To cover the needs of the whole country probably several small homes, in appropriate situations, would be needed to effectively aid this class.

Alcoholic cases have not been helped hitherto, and as inebriate homes exclude mental cases, provision similar in character and extent to that needed for epileptics would be needed for this class. Both of these classes, in the absence of after-care, lose much of the benefit derived from their treatment.

Aged persons, recovered from their mental trouble but unfit for occupation, have been unaided by the Association, and their only resource, where they have no friends, is a life in the workhouse. This, in a certain proportion of cases, is a hardship which it would be desirable to avoid if suitable homes could be provided. Many would have old-age pensions.

After-care is needed for the large number of mental cases under the Ministry of Pensions, and this, if means were forthcoming,

should be an additional opportunity of usefulness. The Ministry of Pensions is desirous that such help should be provided, and if the After-Care Association could find the necessary funds its help would almost certainly be made use of.

The "boarding-out" of partly recovered cases might be greatly extended in England, I believe, by the After-Care Association, aiding in finding suitable homes and hosts for such cases, who when so placed would be monetarily provided for and supervised by the Poor Law Authorities under the inspection of the Board of Control as at present provided.

In Scotland a large proportion of the insane has been "boarded out" for many years past, and this has been carried out in Germany to a large extent, even in large towns, such as Berlin.

There can be no doubt that a similar proportion of cases fit to be boarded out exists in England as in Scottish mental hospitals, and the only obstacle has been the provision of suitable conditions for them.

In Scotland the provision has been made by the Poor Law, the supervision being carried out by Poor Law doctors and officials, supervised by Lunacy Board officials, and this has worked satisfactorily.

It is, however, possible that if the Poor Law provision was assisted by the aid of a voluntary benevolent association, with appropriately trained helpers, the system might work even more satisfactorily, that boarding-out difficulties might be more readily overcome and the system largely extended.

In this way a great number of partially recovered patients, now condemned to an institutional life, would not only have a greater enjoyment of existence, but, if the Scottish experience can be relied on, a greater hope of ultimate recovery. Many of them, under suitable supervision, might find occupation that might be equivalent to some part of their maintenance, and this, in any case, would be less than that in an institution, while the mental hospitals might be relieved of some thousands of cases.

Mental after-care has been so fully recognized as an absolute necessity in the provision for mental diseases that there can be no doubt that the means of providing it will in time be forthcoming. The facts that *the King has made a handsome contribution to the funds of the Association*, and that *the Prince of Wales has become its Patron*, are a sufficient evidence of the success and necessity of the work.

The committees of the county and borough asylums possess the power of contributing to mental after-care funds, and the boards of guardians can do the same, although in both instances the power as yet has not been extensively employed.

The ideal organization of after-care would be the establishment of local committees in connection with each large mental hospital or in each smaller county, with larger divisional associations in the chief centres of population, these latter being especially in relation with the Divisions of the Medico-Psychological Association.

It has to be borne in mind that a great and largely increasing number of cases of uncertified mental disease are now being treated in the out-patient clinics of the general hospitals and asylums, in infirmaries and other homes. These are most numerous in the large centres of population, such as London, Manchester, Liverpool, etc., and since the funds of the county and borough asylums would not be available for such patients, the monetary provision for dealing with these could not be raised by the small local branches, and must come from the charitable efforts of these large centres. It is also to these divisional branches, with their larger opportunities for collection of funds, that the help must come, in great measure, for the establishment of homes for epileptics, alcoholics, etc., if ever these become possible. These must depend for their supervision and management on the larger centres, even if monetary aid was obtained from the Government. Such forms of after-care could not be undertaken by small local branches, although patients coming from all the branches in the Division would need to send patients to them.

The local mental after-care branches would be largely supported by the contributions from the local mental hospital committees and boards of guardians, as well as by collections in the hospitals and private donations for the purpose of after-care. This would necessitate a very careful report of their expenditure to assure the public and contributing bodies that the money had been expended solely for after-care purposes, and the committee expending such funds should be termed an "after-care committee," however closely it might be allied with the local committees for dealing with Mental Welfare.

An inquiry addressed recently to the medical superintendents and committees of mental hospitals shows that some are desirous of avoiding such Association, but that others are willing to do so. In some localities after-care committees are already in full work, being affiliated with the Central Association, and in a few instances the report is made that the conditions in the locality are such as not at present to demand a committee.

It is possible, as has been found by past experience, that committees cannot be formed in some districts, or, having been formed, become unable to work satisfactorily. In such cases the nearest divisional branch would probably undertake the work.

This sketch of mental after-care organization appears to the writer, after more than thirty years' official experience, to be necessary to carry out thoroughly its share in the progress of mental hygiene in England and Wales.

Moral Imbecility. By IAN D. SUTTIE, M.B., F.R.F.P.&S.Glasg.,
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THERE is a type of social psychology which finds the explanation of man's social behaviour in a hypothetical "disposition" of his mind. This motive-complex is conceived as specialized for the function of adapting conduct to social life, and as being in itself relatively closely integrated, developing and functioning as a whole. Of this hypothetical "gregarious instinct" McDougall goes so far as to say: "For it is highly probable that instinctive dispositions are Mendelian units" (*Journ of Abn. Psych. and Soc. Psych.*, vol. xvi, p. 316). This plainly suggests that the *unity* of the social disposition (its existence as a discrete factor in development) is to be regarded as antedating experience—that it is an ultimate datum for psychology not susceptible to analysis, and is *not* a derivative of any other known motive such as "love," "fear," or "hope of reward." This "instinct" interpretation of social behaviour has been criticized on many grounds (as unfruitful for psychology and incompatible with biological fact); but of course the demonstration of a Mendelian transmission of the social disposition would compel us to regard it as an *element* of character. Our conception of mental development and of the "socialization" of the individual, of the relative significance of upbringing as compared with organic endowment and our whole psycho-pathology depend upon our acceptance or rejection of McDougall's view. If he is right in regard to the germinal "unit" determination of the social disposition, criminological studies should offer verification. I propose, therefore, to consider how far we are justified in regarding moral insanity and moral imbecility as true "morbid entities."

Our problem may be roughly stated: How far is the social disposition of man a "unitary character," relatively integrated within the larger whole of the organism, and relatively independent of similarly integrated "impulse-bundles"? How far does it function as a discrete factor in development and in behaviour? If we are able to demonstrate pathological disintegrations selectively affecting social behaviour; if we find gross congenital defect of this function uncorrelated with defect in any other; above all,

if such defect should be transmissible in Mendelian "patterns," then the question would be settled in McDougall's favour. If not, our research might still bring to light other correlations interesting and important in themselves, and perhaps throwing light upon the nature of the social bond. We wish, therefore, to know whether social reactions are ever selectively disordered or defective, and if so, the etiology and pathogenesis of such conditions.

Clinical data, however, do not seem at first sight to decide unequivocally whether such specialized or limited abnormality does or does not occur. At least we find absolute differences of opinion among observers as to whether moral abnormality exists *per se*. Tredgold, for example, is confident not only that this is a clinical entity, but that the mind is made up of "four chief senses or sentiments," moral, religious, artistic and rational. He considers these components are independent variables. At the opposite extreme we find Healy declaring "that probably all moral imbeciles are primarily mentally abnormal." The most he allows is "that if the moral imbecile exists who is free from all other forms of intellectual defect he must indeed be a *rara avis*." Though constantly on the look-out Healy has never found one.

The conflict of opinion as to the existence of abnormality limited to social behaviour turns mainly on the question of the relation of such a moral defect to *intellectual* defect, some considering that there are instances of a congenital incapacity to appreciate moral relations without any impairment of the other functions of mind. Others, again, hold that moral defect or disorder is always secondary to intellectual inferiority. We can discern, however, a number of reasons why moral and intellectual defect should appear to be associated even though possibly independent. In the first place a wide range of intellectual inferiority is found in the general population—extreme dulness being quite compatible with a moral life. Though the proportion of intellectually defectives may be abnormally high among offenders, many causes may operate to bring this about.⁽¹⁾ For instance, the unintelligent are exposed to greater temptation, are less able to resist these on *prudential* grounds and are more liable to detection. Though they bulk largely in the group of convicted delinquents we cannot generalize and say probably all offenders are defective more or less. It appears to me that some writers have a tendency to do this; they overlook the great variety that is within the limits of the normal. It would be easy to devise a group of intelligence tests that would find weak spots in any average intelligence. If, therefore, we look for the mental defect until we find it, as one writer recommends, we will certainly find it wherever our preconceptions require it to be found. We must, in fact, consider

whether all incorrigible delinquents show a cognitive inferiority WHICH ACCOUNTS FULLY FOR THEIR BAD CONDUCT.

There is another circumstance tending to over-emphasize the association of mental and moral defect. In our psychiatric examination of delinquents we must to some extent depend upon discussion of ethical situations. Now a stupid patient is at a disadvantage here and his incompetence to utilize abstract conceptions might lead us to underestimate his moral sense. He might, of course, be unable to explain and to criticize his conduct and yet have a sound intuitive perception of moral obligations in a concrete situation. On the other hand, a highly intelligent man will appreciate the purpose of the interview: he knows the right attitudes to adopt and the *normal* answers to give. He knows, in fact, all about morality and social life; his ethical understanding is perfect. Here we may miss a true case of moral imbecility by diagnosing it a normal criminal. Yet again a man may be so anti-social, so suspicious, so out of sympathy with his fellows in general and his examiner in particular, that he neither follows his questions with interest nor exerts himself to respond. Here there will be a tendency for the examiner to attribute, erroneously, a *deficiency of intelligence* to a case of *moral disorder*. Not only, then, does the mode of selection of our material tend to present us mainly with cases in which mental defect complicates moral disorder, but in our examination of these cases there are many circumstances that would lead us to confuse the two. It is extremely difficult to estimate the two factors separately. Our evaluation of the moral condition of the patient is largely dependent upon his intelligence; our estimate of his intelligence depends somewhat upon the emotional *rapprochement* (*i.e.*, social) between examiner and examinee. For test purposes intelligence is really social intelligence, and moral disposition is intelligent appreciation of social standards.

On examining the genetic relationship of moral and intellectual defect we find yet another reason for their close association. It is obvious that gross congenital defect of cognitive capacity will disable the affected individual from mastering the *principles* which govern social relationships, or even from learning and remembering the customs of his community. It seems probable, moreover, that a radical defect in the social *rapprochement* must have equally disastrous effects upon intellectual development. This latter process consists largely in the assimilation of tradition and in the acquisition of skill in the use of complex abstract thought symbols. Both these acquisitions depend not only upon intimate and constant contact with minds of similar interests, but also upon the existence of a DIRECT AFFECTIVE RELATIONSHIP BETWEEN THE LEARNER AND HIS

TEACHERS. The precise nature of this bond it is the ultimate object of social psychology to discover; meantime it seems certain that in its absence *learning from others* would be impossible. Some personal attachment seems, then, a pre-condition of intellectual development, as being necessary to establish or maintain the sympathetic understanding, the identity of interest and point of view that is required if the child is to acquire and correctly apply his community's conceptual formulation of environment. We know how cross-purposes, difference in point of view, etc., stultify science and philosophy, and how the resulting misunderstandings may confound human intelligence for generations. Any such misunderstandings and disharmonies between the child mind and its teacher would render development impossible. The affective attuning of minds is then necessary, for their interaction and development requires also that interest in others which motivates the playful interactions of conversation. This co-operative play-thinking is a *sine qua non* of mental development. It is a commonplace how even at school age the affective relations of teacher and taught affect the latter's intellectual interest and progress. Refusal to learn at this age may merely deprive the individual of school knowledge, but non-incentive to learn at an earlier age may lead to ignorance and stupidity indistinguishable from congenital defect. We see then that even in the event of a constant concomitance of moral and intellectual abnormality being demonstrated, we must not on that account jump to the conclusion that intellectual defect is necessarily primary and fundamental. We must in fact trace out the precise mechanism of the correlation, and not merely state the association of the two conditions as a statistical fact.

In this connection we may anticipate a later observation. The more intelligent of the morally defective sometimes exhibit a curious and highly specific stupidity in their *social relations*. This is not because of the complexity of the latter, which are well enough "understood." These cases fail in the INTUITIVE APPRECIATION OF OTHER PEOPLE'S ATTITUDES AND FEELINGS. They are clumsy in their social relations, because of their lack of sympathy. The stupidities into which this may lead them vary from the slightest and the most laughable maladroitness to the grossest blunders. It is sometimes possible to describe the same offence in two alternative ways, both true to fact. One of these ways may picture the action of the culprit as childlike, or stupid to the point of imbecility. The other may as plausibly regard it as the oversight of a crafty villain. Medical testimony tends to emphasize the *stupidity* of the offence as evidence of *intellectual defect* or of psychopathy. The Court, however, is often able to satisfy itself that the *general intelligence*

of the offender is up to average. The intellectualist preoccupation of both parties causes them both to overlook the fact that this stupidity indicates neither chance oversight nor radical mental inferiority, but rather a defect in social *flair*. Here is another reason for the prevalent opinion that offenders are mostly intellectually defective or mentally normal; the possibility of moral defect is overlooked.

We will now consider an *à priori* argument often advanced (oftener still tacit), that the fact of misconduct *in itself* implies intellectual defect inasmuch as wrong-doing is contrary to the evil-doer's own best interests. The position that crime is insanity is made the basis of a ridiculous attack upon the principle of punishment. Partly as a reaction to this subversive movement, partly from the same rationalistic preconceptions, the law adheres steadfastly to the view that only intellectual abnormality limits criminal responsibility. Both of these attitudes to crime show an overvaluation of prudential motives and intelligence as factors in social conduct. This is, in fact, the fallacy of hedonistic utilitarianism, which finds in the reasonable calculated pursuit of pleasure, in the enlightened and rational self-interest, the whole cause of social conduct. As an ethical dogma this has fallen into disrepute; as a preconception influencing practical judgments it seems as strong as ever. The argument is this: "If the patient could understand the disadvantages and appreciate the consequences of such conduct he would abstain." Certainly for those who consider that conformity to social exigencies is solely and sufficiently motivated by prudence and the policy of honesty, it is difficult to conceive of moral imbecility without concomitant intellectual inferiority. We now know that "economic man," if not a fabulous monster, corresponds pretty closely to our conception of a moral imbecile. Rationalistic ethics regards this character as typical of the good citizen. This may of course be true, in which case the search for an affective socializing factor, instinctive or derivative (under the influence of culture) is illusory. The conception of human nature as rational or "economic" is, however, thoroughly discredited, and was indeed based on a one-sided view of social obligations as comprising only those incidental demands upon self-denial in connection with which WE ARE IN THE HABIT OF EXPERIENCING CONFLICT. As is now well known, the vast majority of social reactions are, by normal adults, performed as automatically with as little conscious deliberation—"shall I or shall I not"—as reflexes. Many of these customary reactions, moreover, are highly A-RATIONAL and even disadvantageous to the individual performing them, and to the community at whose unspoken demands they are performed. A

more comprehensive view of social motive is, therefore, necessary than that offered by utilitarian ethics, and this involves a corresponding modification in our theory of antisocial conduct. If we do not wish to saddle ourselves with the task of defending an abandoned and untenable psycho-sociological theory, we must cease to look upon intellect as the foundation of social conduct and upon abnormalities of intellect as the source of all social maladaptation (²).

It may be true that the normal man in resisting a temptation applies some such formula as "honesty is the best policy." But is this judgment the real cause of his continued probity, and is the process truly intellectual? I should imagine that a purely intelligent decision would depend upon weighing the probability and value of the forbidden gain against the probability of detection and the severity of consequent punishment. This punishment, moreover, is itself largely moral rather than material, and so is not really grievous to the man who is insensitive to his fellow's feelings. Does even the business man (and we know that a modified code of morals is supposed to be sanctioned in business) weigh and consider dispassionately every possibility of gainful wrong-doing? Even if he did, this would not establish a norm, and we might have to consider this class (in the pursuit of their occupation) as enjoying (!) a *special* custom-sanctioned licence. Our problem is really this—Is intelligence the prime and general cause of moral (or social) conduct? Even the most unscrupulous business man would protest that he does not order his whole life by his business standards, unless he pretended to probity in business, or on the other hand, with Bottomley, claimed that all morality was cant. This double moral standard is quite a well-recognized phenomenon, and we must ask ourselves, are both of these moralities based on intelligence, and if so, why do they differ?

But if we do not confine our attention to commercial dealings (where varying views of rights are possible and not settled by custom, and where the only personal motive is the desire for gain), and if we consider the general conduct of life, we find that normal men do not meet temptation intellectually at all. On the contrary, where they do not yield to temptation they turn from it in horror and fear, thus resolving the conflict on purely emotional, *i.e.*, non-rational, lines. Self-interest and the real possibilities of the situation are not considered, nor is a balance of pros and cons calculated. The forbidden desire is met by an equally emotional resistance, and even where the conflict is not at once decided, it continues to be fought out on emotional lines. At most there are intervals of rationalization, but reason is rather a spectator whose approval is sought than

an effective director of action. It merely serves to bring other motives into relation with the point at issue, and of these motives long-sighted self-interest is lamentably weak even in intelligent and well-behaved people. The social sanction takes form within the mind as a compulsion or an a-rational dread. The rational examination of this sanction would generally weaken it and thus pave the way for a-moral conduct.

In this connection the voice of the people is the voice of God, and whether it is obeyed from love or from fear it is obeyed on emotional grounds. To anticipate a future article, we see here the cause of the criminality of mobs: they are their own social sanction, their own public opinion; they cease to be a psychic part of the larger community, and no longer owe deference to the laws and customs of the latter. We may go further than this and say that not only does the fear, respect or love of one's fellows and of the mystic public opinion prevent the normal man from examining intellectually a chance of wrong-doing, but that probably in the vast majority of cases opportunities of pleasurable and gainful wrong-doing PASS UNNOTICED. People are blind to the chances of doing "the things that are not done" by members of their own community. Habit will not explain this altogether, for habit can only be formed by the operation of a motive. We see, moreover, that in regard to social conduct powerful motives are always operative. The motive behind the habit cannot have been rational self-interest, for the habits of self-denial are formed at an age and in regard to activities which forbid such an explanation. It is, of course, true in a sense that all motive whatever is related to or derived from self-interest, for attachment to others is pleasurable, and dependent to begin with on the pleasure others give us. But the selfishness of such motives early disappears from consciousness, and the gain from the conduct it motivates is often non-existent. The distinction between pleasure and duty is real if not fundamental, and the reduction of all modes of conduct to the expression of the pleasure-pain principle obliterates real and useful distinctions. It is a fact that people do things for which they have no instinctive desire and which bring them no pleasure; they may even incur loss and injury without limit. Though this unselfish conduct may be derived from originally selfish motives, the change is real and important, and we wish to know how it came about. To insist on hedonistic and utilitarian interpretations of all behaviour results in straining the facts of social conduct through the formulæ of individual psychology, giving us a very incomplete view.

Consider now the case of a hypothetical moral imbecile. (He will not overlook the opportunities of wrong-doing.) He is in

the unhappy position of the "economic man," of having to decide whether each particular temptation is worth the risks that yielding to it involves. To the desire of the moment he has nothing better to oppose than prudential considerations; he is not startled and horrified by the idea of wrong-doing, and an opportunity for him is a chance to be seized rather than an evil omen. Even imprisonment means merely a period of privation, and for that matter, as a good egotist, he generally has supreme confidence in his luck. For the normal man in all crimes but murder, it is the trial, the disgrace as much as the actual punishment that is the deterrent where the deterrent is actually considered. The moral imbecile shows up well at his trial—perhaps conducts his own case. Any sort of acquittal (in Scotland, "not proven" verdict) is a triumph for him. He takes a highly legalistic view of the proceedings, and cannot really appreciate why the jury and the public should be prejudiced against him by his employing quibbles and technical evasions. We find prisoners who have made no secret of their guilt and are yet bitterly aggrieved over their conviction feel that they have put up a good defence and *deserve* to get off. For them a commonsense verdict is not "playing the game." When they have fallen into social disrepute these people are genuinely indignant, make no effort to rehabilitate themselves, and justify themselves into an increasingly anti-social attitude.

Unless social sanctions are immediate and well enforced the moral imbecile can see no reason for self-denial. In like circumstances the normal individual conforms without seeking any reason, without indeed reflecting whether social exactions are justified by social necessities. The gravity of crime is intuitively, not intellectually assessed, as is apparent from a consideration of recent conditions in Ireland. It has been accepted in our culture that crimes aiming at a change of government are less heinous than similar crimes gratifying the selfish desires of individuals. But in Ireland there was endless confusion and disagreement as to whether secret murder was or was not merely such a "political" crime. No clear distinction seems to have been drawn by either of the contestants between acts subversive of a particular and alien political authority and acts subversive of all social life. Even the lawyers and the journalists *felt* rather than thought about it—that is to say, their appreciation of the social significance of the act was purely intuitive. If, then, deliberate, professional judgments of social conduct are not intellectual, what is the sense of pretending that individuals shape and control their own conduct by an understanding of consequences?⁽³⁾

We see, then, that reason—the appreciation of practical consequences

—does not play a great part either in prescribing or enforcing social conduct. If, then, the OTHER FACTOR—whatever it may be—is deficient or disturbed, then intelligence will have a task imposed upon it to which it is not normally adapted. We must reject, then, the argument that a wrong-doer must either be intellectually deficient or else a normal man whose plans have miscarried. Theoretically, then, it is possible that a defect in the social disposition will lead an individual into wrong-doing even though there is no defect in his intelligence.

Bearing this conclusion in mind, we may proceed to examine whether there is a definite group of cases characterized by primary moral defect, and if so whether such defect is congenital. We will not expect to find such a group clearly and sharply defined. The conflict of opinion regarding its existence would have warned us against such an anticipation, apart altogether from the considerations previously adduced, showing how moral and intellectual defect tend to implicate each other and to be confused by examination methods. We must, nevertheless, see how far it is possible to discover a clinical entity corresponding to the conception of moral imbecility.

We must begin by ruling out the following groups of cases which bear a superficial resemblance to moral imbecility:

(1) Those who are primarily and substantially defective or disordered in intellect, so that their *understanding* of their actions or of the complex social situation and exigencies to which they must adapt is seriously impaired. Any mental defect implies inefficiency and some consequent privation in life, hence special temptations to illicit gratification where normal satisfaction and even necessities are hardly attainable. We must therefore distinguish from moral imbeciles the large heterogeneous group of *defective* delinquents, the shiftless, the vagabonds, the catspaws, the economically inefficient.

(2) Post-psychotic deteriorations, abortive dementia præcox, form an important group which may have important etiological relations with moral imbecility; they should, however, be tentatively excluded until we determine whether moral abnormality exists in more specific form, *i.e.*, without general affective deterioration.

(3) It is conceivable that a morally normal person might become a habitual criminal through lack of opportunity, lack of strength and stability of general character to rehabilitate himself socially. I would regard such cases as moral deteriorations consequent upon a disruption of social relations.

(4) We must also exclude "gangsters," and bred criminals who do possess social sentiments of a sort. These differ from moral

imbeciles in being loyal members, good citizens (!) of their own little predatory communities. They are not a-social, and defend the anti-social activities of their group. The frankly criminal gang spirit does not in Great Britain reach quite the same corporate and explicit development as in Italy, Ireland, America or China, though *class* anti-social activities are common enough. For really good examples of a criminal tradition we must go to the criminal tribes of India, though as minor factors in crime the criminal family and group do play a part in this country also. The criminal, then, may only be relatively a-social and a-moral, the moral imbecile *ex hypothesi* absolutely so.

(5) Again we find in anarchical revolutionaries individuals whose behaviour is violently and consistently anti-social, whose anti-sociality (generally disguised as antipathy to certain specific institutions) is an end in itself, conscious and deliberate, and not merely evinced as self-indulgence and grudges against those who punish it. Such individuals indeed may be ascetic. Though some cases classed as moral imbeciles may be genetically related to this group, I think the latter are purely psychopathic. A radical antagonism fastening upon certain forms or institutions of society does not imply the absence of any social *rapprochement*; on the contrary, it implies its presence in a negative or distorted form. It might be regarded as a moral insanity but not as imbecility.

Having defined this group by exclusion, following as far as possible current opinion, we must consider its contents. We find a variety of cases described as moral imbeciles; in order to classify these we must distinguish four groups (nearly identical with Tredgold's):

(i) Mischievous, antagonistic, actively, intentionally anti-social individuals.

(ii) Insensitive, selfish, a-social cases.

(iii) Facile cases who respond to the suggestion of the moment, who know right from wrong and who are even capable of kindly and generous feeling. Their sentiments either are not aroused in the moment of temptation, or if they are, are unable to control conduct.

(iv) "Explosives" whose intelligence and social nature are even better developed than in the above, but who, under the influence of passion, lose all control of themselves. They are more dynamic than class iii, but are like these in their instability.

(i) In regard to the first group, any cases of repeated "malicious mischief" I have seen, have either been grossly defective in other ways, or have developed a very definite anti-social grudge in response to [punishment and hardship. Fire-raising and other

spectacular forms of destruction are, of course, very attractive to the defective mind. Here, however, the motive is not to do harm to others, but simply the desire for a certain sensuous enjoyment. It does not indicate any special affective attitude to fellow-beings. Such a case I would describe as having perverse or perhaps obsessive desires which he does not control, since his general defect has prevented his acquiring the necessary moral knowledge and sentiments. He is merely a delinquent defective, not a moral imbecile. His intellectual defect is primary, his destructiveness has no anti-social motive. On the other hand, cruelty and malice indicate plainly an abnormality centring in affective relationships to fellows. Whether this cruelty has the object of enhancing the feeling of power or whether it is of directly sadistic motivation, in either case it depends upon an affective bond, and implies the existence of some appreciation, however abnormal, of the feelings of others. These cases should be included in our group, though it is difficult to draw the line between them and other cases where intellectual defect is primary. Their relation to the neurotic anti-social group will be noticed.

(ii) The insensitive group includes a number of highly intelligent but utterly unscrupulous individuals—the moral defectives proper. These people know well the difference between right and wrong, and the proper application of these terms; they are keenly aware of the consequences of detection in wrong-doing, and may show great ability in avoiding it. They are not cruel or hostile, nor proud and revengeful; they are not, to begin with, anxious to do harm; they are selfish, not self-centred. The self-centred may be constantly pre-occupied with social judgments and standards as applied to himself—troubled about what other people are thinking or might think about him. Self-consciousness is the reaction of a highly socialized disposition. The selfishness of these cases is naïve, unreflective like that of a child; they regard others either as competitors or as tools.

By the time they are adult these insensitives have mostly learnt the importance of keeping within the law. They may even be alive to the value of a good reputation; their indifference to the rights and feelings of others need not, therefore, be so flagrantly shown as to interfere with their economic efficiency. Up to a point they may be good business men and take kindly to the rules of commercial morality. But they carry their sharp practice too far; they have not the intuitive caution of their fellows; they never know where to stop, and sooner or later they take risks with the law, with public opinion or with their customers or friends, which are out of all proportion to possible gains. Their defect also shows

itself in tactlessness; they make enemies needlessly, and do not get the best work out of subordinates and those with whom they have dealings. This nullifies the advantage of an often striking manner and personality, which is due to a lack of deference for others and of self-consciousness. The over-valuation of self characteristic of these cases is impressive: they are brazen and convincing liars, act a part very well, and can study an intended victim very shrewdly, being well aware of the effect of appeals to the lower nature and unashamed to make them. All these and other characteristics make up a personality that is often very striking in its way, and which is the true reason for the frequently amazing success of their frauds.

No clear line can be drawn between this class and the normal; their imperfect appreciation of social conditions and their recklessness—as it appears to ordinary men—may be foolish, yet no tests or interrogations can establish a definite intelligence defect. They are accordingly subjected to penal discipline until the obvious failure of this method, and perhaps secondary deterioration due to imprisonment, finally convinces the authorities that they are dealing with abnormal individuals.

(iii) The characteristic defect of the group of facile cases is instability and lack of continuity. Their ideals and sentiments expend themselves in feeling—in relation, that is to say, to the mental life rather than to behaviour. They alternately reform and relapse; they go on turning over new leaves with enthusiasm and the best intentions to the end of the book. By calling them weak characters we indicate our intuitive perception of a moral defect—a defect of integration of the sentiments into personality, without which synthesis life is lived as a succession of impulsive reactions rather than as a coherent whole.

(iv) The explosives have the characteristic peculiarity that as soon as any passion reaches a certain intensity it appears to increase automatically, discharging itself in a paroxysm during which the rest of the personality seems in abeyance. The whole organism, body and mind, is dominated by the emotion of the moment. No other stimulus is felt, no inhibiting or indifferent thought can reach consciousness. At ordinary times such cases appear not only to have normal sentiments, but even to have good self-control. As soon as the limit of the latter is passed, however, it vanishes utterly, and does not reappear at all until the storm has spent itself. The impression conveyed by such cases is that of an excited emotivity. The normal tendency for any active emotion to become dominant is here quite unchecked, and the emotion seems to increase in a sort of vicious circle; the active emotion appears to inhibit all the others. I see no reason to suppose that the emotions are stronger

than normal, as some writers insist. It is the integration that is defective, allowing each emotion unchecked and maximal expression.

These four groups together present a very heterogeneous assortment of cases. It is not easy to find in them any common concrete psychological character, while the differences they cover are profound. Of supreme importance—at any rate for our present inquiry—is the question of the nature and strength of the affective attitude to fellow-men. In the first group this *rappor*t is variable and disordered; in the second it is weak; in the other two it is not markedly abnormal, *but defective integration of personality or an unregulated emotional mechanism prevents its controlling conduct*. The most striking difference is that between the group of cases (ii) in which the social disposition is weak, or insufficiently developed, and the other three groups in which it is perverted or thwarted in some way. This difference strongly suggests a radical difference in ætiology or pathogenesis. These four groups, however, are only descriptive; they are not even empirically well defined, and have no claim to be regarded as psycho-pathological entities. Since our purpose is to discover to what extent defect or disease can selectively affect the social disposition (*i.e.*, without a general mental abnormality), we must push our analysis and definition further, even at the expense of further limiting the application of the conception of moral psychopathy.

We have already noticed that cruelty and malice actually vouch for the presence of a special social *rappor*t, though perverse. The bully craves a sort of admiration, the sadist appreciates the feelings of his victim—they have a form at any rate of organic sympathy. It is probably permissible to regard the former as a secondary perversion, or even, as in some cases, a reaction to a sense of inferiority, or a resentment of punishment and privation not comprehended and acquiesced in. The class of moral psychopath characterized by these cruel and malicious reactions is therefore probably not pathologically distinct though socially conspicuous. We will accordingly devote no further attention to it as a class, and in the same way we will assume that the explosive type has no fundamental defect or disorder of his moral sentiments and feelings, but that his abnormal tendency to an all-or-nothing, one-way discharge of emotion (and consequently to its crude physical expression) is the consequence of a faulty physical or psychical make-up.

It is a commonplace that there is a normal tendency for every instinct to inhibit all activities irrelevant to its purpose, and to make use of all the resources of the organism until its ends have

been achieved. The emotion of an instinct, by flooding the mind, holds up mental activities which might compete or criticize. Homologous with this all-or-nothing reaction for the organism as a whole we find in the intellectual sphere the dominance of one interest in attention. Mental concentration, however, is wholly good, for thought processes are merely experimental, *i.e.*, they do not commit the organism to irrevocable action and to the expenditure of much energy, but work out ideal plans of action of which one alternative is chosen for realization. In the course of development we find mental processes "taking over" to a certain extent from the primitive organic reaction, and in this way bringing the interest-emotion of the moment into relation with other interests. The feelings and desires evoked by the state of the organism and its environmental opportunities are then less dominant; they are integrated into life-purposes and regulate behaviour on a longer view. This integration, though achieved under social direction, does not appear to me to be simply a function of the social disposition. Failure of affective integration is not, therefore, synonymous with failure of the social *rapport* or moral imbecility. Tentatively, therefore, I exclude this group from that of moral imbeciles, though the pathogenesis of the condition must be related, and though the explosives and the faciles are both essentially unstable.

Our search for an abnormality limited to the social sentiments is now narrowed down to groups 2 and 3—the a-social and the facile. If a specific moral defect or disorder exists, we should find it here. Theoretically and in well-marked instances, the distinction between these groups is fairly definite. In the first the social sentiments are imperfectly developed, in the second they appear ineffectively articulated with every-day life; actually, however, we cannot regard the latter as having normal social sentiments, and cases exist, for example, which really belong to the first group, and which seem, nevertheless, to have genuine religious feeling. The analysis of clinical data should, however, be postponed until after a consideration of the social *rapport* as manifested in mob behaviour.

(¹) See, however, Cyril Burt, "Delinquency and Mental Defect," *Brit. Journ. Med. Psych.*, 1923, p. 169.—(²) It will, of course, be asserted as usual that no one supports the utilitarian ethical theory, etc. Both in writings and in testimony, however, there is abundant evidence of the belief that the folly of wrong-doing connotes defect of intelligence.—(³) It is interesting to note that the early Norse settlers of Iceland recognized the *special* gravity of an *unavowed* manslaughter (*Saga of Burnt Njal*). If the killer avowed the deed he had to reckon merely with the blood feud and was not despised. If he did not declare himself he was a murderer—an offender against *public* security.

The Method and Uses of Cisternal Puncture. By W. S. DAWSON, M.D.Oxon., The Maudsley Hospital, London.

THE puncture of the cisterna magna was proposed and carried out in 1919 by Wegeforth, Ayer and Essick (1), who performed a series of experiments on animals before applying the method to man.

The cisterna magna or cerebello-medullaris is a sub-arachnoid space formed by the under-surface of the cerebellum and the dorsal aspect of the medulla. On its upper aspect the cisterna is bounded by the inferior vermis and the hemispheres of the cerebellum. The transverse diameter varies from 5 to 6 cm., while antero-posteriorly the depth rarely exceeds 2 cm. At the outer side of the flocculus the cisterna communicates with the lateral recess of the fourth ventricle through the foramen of Luschka, while anteriorly in the middle line the foramen of Magendie opens into the fourth ventricle at its lower end. The cisterna magna is in continuity with the cisterna spinalis, and so with the medullary and pontine cisterns and the interpeduncular space. It has been shown that substances injected into the cisterna magna may pass into the spinal canal, the cisterna basalis and cisterna pontis, and thence upwards above the corpus callosum and also into the Sylvian fissure, so as to bathe the whole cortex.

The puncture is performed as follows : The head should be shaved in the mid-line below the external occipital protuberance down to the lower cervical spines. All aseptic precautions should be observed as for lumbar puncture. Special needles are used of a narrower bore and shorter than those used in lumbar puncture. The patient should lie down on his side with the head bent forwards on to the chest, and supported on a pillow in such a way that it is set squarely on the spinal column and not rotated or inclined to either shoulder. The puncture is made in the midline in the space between the lower edge of the foramen magnum and the upper edge of the atlas. The spine of the axis may be palpated and the needle inserted a little above. The procedure is almost painless, although a local anæsthetic or an injection of morphia may be given to an apprehensive patient. The direction of the puncture is in a line passing through the external auditory meatus and the nasion or root of the nose. After the skin has been pierced the needle encounters the ligamentum nuchæ, which offers a fair resistance, and, when this has been traversed, the occipito-atloid ligament, which is even tougher. Resistance now ceases until the needle has been thrust a fraction of a centimetre further, when the dura

is felt. A little push drives the needle into the cisterna magna. The needle should never be inserted more than 5 cm. under the skin. If no fluid is obtained at this depth another puncture should be made at a slightly different level, but still in the midline. If the needle is pushed in more than $6\frac{1}{2}$ cm. there is grave risk of injury to the vital centres in the medulla. Pfister (2) reports a case in which breathing ceased when the needle had been inserted over $6\frac{1}{2}$ cm.; the patient recovered after artificial respiration had been performed for several hours. Success depends upon placing the patient in the proper position and upon keeping the needle strictly in the middle line. If the needle is pushed forward slowly and carefully until the resistance offered by the ligaments is no longer felt the procedure is without risk.

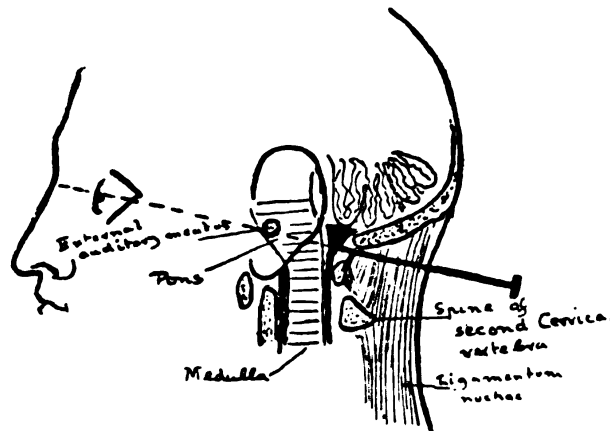


Diagram showing direction of puncture (after Pfister).

Cisternal puncture may be performed both for diagnosis and as a therapeutic measure. As regards diagnosis it is of limited value, and has few advantages over the safer procedure of lumbar puncture. It is questionable whether the fluid obtained from cisternal puncture ever gives information which may not be obtained from lumbar fluid. The injection of substances which are opaque to X-rays into the cisterna magna allows of the accurate determination of the upper limits of spinal tumours.

Good results have been reported by Sir James Purves-Stewart and others (3) (4) from the injection of salvarsanized serum in cerebral syphilis and general paralysis. But the results are often disappointing. There may be a reduction in the number of leucocytes and in the amount of globulin without any material improvement in the clinical condition. Pfister (2) reports good results from the injection of .75 to 3.0 mg. salvarsan in normal saline added to 40 or 50 c.c. of cerebrospinal fluid, especially in syphilitic

meningitis of the base of the brain. McCusker (5) gives encouraging reports of repeated injections of salvarsanized serum, and also describes non-syphilitic cases in which headaches and feelings of cerebral congestion were relieved by cisternal puncture. Lavage of the cerebrospinal fluid has been performed in tubercular and other forms of meningitis through combined cisternal and lumbar puncture (Ayer (6)).

In the following short series of cases the fluids obtained from cisternal and lumbar puncture were compared as regards the strength of the Wassermann reaction, number of cells, percentage of protein and the Lange curve. Candler and Mann (7) compared the intensity of the Wassermann reaction of the cerebrospinal fluid withdrawn from the lateral ventricles and from the spinal canal after death in cases of general paralysis, and found that invariably the lumbar fluid gave a more intense reaction. The intensity varied from twice to ten times as much.

CASE 1.—Male, æt. 6. Encephalitis lethargica. Onset four months ago, with diurnal drowsiness and headache, and restlessness and noisiness at night. He is still drowsy by day, and in the early part of the night has "occupation" delirium, but later sleeps fairly well and is quiet. Cisternal fluid appeared to be under considerable pressure. Puncture was followed by severe vomiting after an interval of two days, although the patient was kept strictly in bed. The vomiting lasted four days. The patient is now as he was before the puncture.

CASE 2.—Male, æt. 11. Encephalitis lethargica. Onset four months ago, with diurnal drowsiness and nocturnal delirium, also diplopia. Now has double ptosis. He is still drowsy by day but is quiet at night. Cisternal puncture caused severe vomiting and headache two days later, lasting three days. He is now as before.

CASE 3.—Male, æt. 8. Encephalitis lethargica. Onset three months ago with headache, drowsiness by day, restlessness at night, and diplopia. He is much better now, though still a little drowsy. Cisterno-lumbar puncture has not altered his condition. There was no after-disturbance.

CASE 4.—Male, æt. 45. Had syphilis three years ago and had eighteen intravenous injections until blood was negative on two occasions. Has been a heavy drinker and has suffered from severe headaches for years. Arteries are thickened and hard; blood-pressure 170/90. *Nil* abnormal noted in the central nervous system. Blood and cerebrospinal fluid both negative to the Wassermann reaction. Cisterno-lumbar puncture has not relieved the headaches, but there were no unpleasant after-effects.

CASES 5-8 are general paralytics.

CASE 9 is one of general paralysis after a course of 16.0 grm. of tryparsamide. Before treatment the cerebrospinal fluid gave a Wassermann of + 40, and there was a big excess of cells and protein. The physical signs of general paralysis persist but there has been an almost complete mental remission.

CASES 10 and 11 both show a strongly positive Wassermann reaction in the blood and have physical signs of tabes.

According to Mestrezat (8), the normal amount of protein in the cerebrospinal fluid may vary from 20 to 30 mgrm. *per cent.* Davis and Ayer (9) give a higher figure—35 to 100. According to the latter, in encephalitis lethargica the figures may be 100 to 200, in tabes the same, in cerebral syphilis and general paralysis 200 to 600. These figures are higher than those found in the present series.

	Cisternal.			Lange.	Lumbar.			Lange.
	Wasser- mann.	Cells per c.mm.	Protein, mgrm. %		Wasser- mann.	Cells per c.mm.	Protein, mgrm. %	
1.	Neg.	3	100	Neg.	Neg.	60	100	Neg.
2.	Neg.	Neg.	40	Neg.	Neg.	Neg.	40	Neg.
3.	Neg.	Neg.	50	Neg.	Neg.	Neg.	50	Neg.
4.	Neg.	10	100	Neg.	Neg.	100	100	Neg.
5.	+ 200	100	200	555542100	+ 200	100	200	555554210
6.	50	85	180	5554321000	50	100	180	5555432100
7.	70	24	80	5555532100	70	40	120	5555543210
8.	8	16	50	5543210000	8	22	110	5544321000
9.	30	Neg.	30	Neg.	30	Neg.	30	Neg.
10.	Neg.	2	60	0023200000	Neg.	6	100	001232000
11.	Neg.	Neg.	30	Neg.	Neg.	Neg.	45	Neg.

In general the lumbar fluid gives more intense reactions than the cisternal. From the standpoint of diagnosis, therefore, cisternal puncture appears to offer no advantages over lumbar puncture, and merely subjects the patient to an unnecessary risk.

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Twenty-eight Years' Lunacy Experience in Egypt (1895-1923).

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PART II.

AN ACCOUNT OF SOME OF THE DIFFICULTIES ENCOUNTERED.

THIS completes a *résumé* of the chief changes made in twenty-eight years. It was an unsuccessful attempt to manage a high admission-rate, no longer considerably helped by a high death-rate, in establishments not sufficient to deal with even a quarter of the admissions. *Persistent overcrowding* only palliated the excessive discharge of patients, and produced great difficulties in administration. The occupation of the dining rooms and corridors by beds prevented ordinary convenience. A high accident-rate and a low recovery-rate were inevitable results of the overcrowding. We were often forced to admit over a thousand cases a year, and to discharge as many, less the number of deaths. Meanwhile these discharged cases committed crimes, and we were continually incurring criticism for our actions. Whenever an extension of accommodation was granted, it was so small, and it took so long to provide, that on its completion it was swamped at once, and the overcrowding was but little relieved. Besides managing the Hospital, one had to besiege the authorities for funds for buildings, in season and out of season, and to take every opportunity to interest them in the work, and educate them as to its importance. The lack of beds for the insane in Egypt remains grave, while in England there are 8,663 vacancies (*vide* Blue Book for 1922). In twenty-eight years the number of beds for the insane in Egypt has risen from 300 to 1,841. Thus there are now 14 beds to every 100,000 of population. Compare 250 in England, and 3 in India to every 100,000. It is still seldom possible in Egypt to treat curable cases until their recovery; thus 527 uncured cases were discharged in 1922, and still only the dangerous and unmanageable can claim hospital treatment.

The slow evolution of lunacy in Egypt is in marked contrast to the rapid extension of other departments, *e.g.*, in the Prisons' Department accommodation has been found for 15,000 prisoners while only 1,841 of the insane have been provided for. Nearly as much prison accommodation is provided in Egypt as in England, while only 1,841 beds exist in Egyptian hospitals for the insane, against 108,000 beds in English public mental hospitals. No doubt security is the first requirement of every State, but the discrepancy is striking.

In this connection I may point out that the proportion of admissions

to beds in Egyptian hospitals for the insane is higher than in any British mental hospital, *viz.*, 1,073 admissions to 1,841 beds in 1922.

The chief cause of the delay in establishing an adequate organization for the management of the insane in Egypt has been *the want of funds*. It has therefore taken twenty-eight years to accomplish what could have been done in three years if funds had been forthcoming. Even at the time in 1904, when large reserve funds became available in Egypt, much of the funds went to large public works, new bridges at Cairo, etc., and we were again disappointed. In 1903 over L.E. 300,000 was granted for building museums for mummies, statues and Arab relics. As a result of this slow addition of buildings, the hospital at Abbâsiya has been continuously under repair and alteration for twenty-five years. Workmen with dangerous tools and ladders have been in the sections all the year round, creating disorder, introducing matches and other forbidden articles, and facilitating thefts and escapes, and to them we owe many accidents.

To meet the varying distribution of the sexes at Abbâsiya on the addition of new sections, it has been necessary to transfer sections from the use of the men to the Hareem, and *vice versa*, by putting high wooden barriers to ensure privacy, and altering roadways and doors. Nearly every year lately such changes had to be made, as the Hareem gradually absorbed part of the male side. All these changes are temporary, and can be suppressed when a third hospital is built.

Progress in controlling lunacy administration was much hampered by *the language difficulty*. At first everything had to be interpreted, and it was some time before I discovered that little of the interpretation was exact, and that it varied with the sympathies of the interpreter. Also, orders given through an interpreter lost much of their weight. Investigations of complaints and abuses were long and weary affairs owing to the necessity of interpretation. A European language would have been troublesome enough, but Arabic, with its separate vocabularies for the spoken and written languages, and its unpronounceable gutturals and its difficult script was a formidable screen between the inquirer and the truth. Besides, the peculiar bent of the Arab mind makes it difficult for the western mind to follow its logic.

All printed forms had to be in two languages. Case notes had to be in English so that I could use them, also because it was very difficult to find the exact Arabic translation for psychological terms. To the end I had to depend on clerks for the reading and writing of all Arabic letters, and as the Government accounts are kept in Arabic, I had to depend entirely on the clerks' accuracy.

Another chronic source of trouble has been *the deficient water supply* at Abbâsiya owing to the high position of the Hospital on the desert.

The Water Company pumps water from the Nile to a reservoir at Abbâsiya, at a level that gives only a slight head of water at that altitude, so that the pressure in the pipes is feeble, and in summer it falls to almost nothing. Every summer we are suddenly left without water even for domestic purposes, and urgent demands for help by telephone, letter and telegram take precedence of all other work. At last, by cutting off the supply to other districts, we obtain a little water. Twopence per cubic metre is paid for water, *i.e.*, nearly L.E. 2,000 per annum for our total supply. On one occasion the cessation of the water supply caused a fatal accident. Although the hot water to the bathroom douches passes through a mixer so that hot water cannot be turned on without opening the cold water tap also, the latter was at the time empty, and only hot water came through the douches on to an unfortunate patient, who died from shock. A peculiar point about the case was that the medical officer, called to see the patient after the accident, pronounced it to be a case of scarlet fever.

The heat of the spring, worse than that of the summer, and accompanied by dusty south winds (*khamseens*), can be alleviated by the use of water; but it was just at that season that no water could be obtained. After enduring the dearth of water for some years we had a water tower built, to which water was pumped electrically at night, and this supply sufficed to give pressure in the fire mains, but it had to be reserved for that purpose. Twice we made borings 30 yards deep, but only found salt water; for a time we used an old well by electric pumping until it caved in and became dangerous. The dearth of water and its high cost have kept the Hospital grounds a parched, barren waste, whereas it could have been turned into a verdant oasis by an abundant water supply. Eventually, quite recently, a new reservoir was built on the adjoining Red Mountain, and the pressure a little improved, but it is still inadequate unless we pump at night. The anxiety felt when a fire-alarm is raised and the tank is almost empty may be imagined.

The *risks of fire* in such a dry climate, and with such a poor water supply, are kept in mind every day, and one is always on the watch. Indeed fires at Abbâsiya Hospital were frequent, *i.e.*, one or two occurred annually, and we instituted elaborate means to minimize this risk by means of alarm switches in every section, under glass. On touching the switch the alarm buzzes on the roof, and warns the asylum fire brigade to assemble; at the same time an indicator at the telephone office (attended night and day) signals the exact position, and automatically a bell is rung to wake the staff there, and a light at the same time illuminates the indicator. All this takes place instantly. The telephone operator then informs the fire

brigade of the position of the fire, and sends similar notices to all officials, and if necessary uses the special telephone wire to call the Abbâsîya Fire Brigade. Thus, if the water supply is good, we have a chance of success, and, in fact, no fire has done any serious damage. All new sections are built of one storey only, purposely on account of the risk of fire among the insane. And doors are provided on every side, openable by ordinary pass-keys, thus facilitating escapes, which might be hindered by special locks. The necessity of having very free ventilation in this hot climate compels us to have all windows fully opened in the summer, but to prevent accidents and escapes iron grills are fixed on them, sentimentally objectionable, but hygienically desirable. In the upper storey of the old palace building these grills would make exit through the windows impossible in case of fire; therefore extra staircases are provided, and doors have been made in all the walls dividing the rooms, so that in each room there are three modes of exit—by doors to the two adjoining rooms on each side, and to the corridor. Thus, wherever the fire starts, there is no blind end. Of course hydrants and hose are provided at frequent intervals, and a fire drill is held in every section every month. To increase the water pressure in case of fire, a by-pass is fixed on the water-main, so that the friction of the water meter can be avoided.

As there is much timber in the walls, roofs, floors, and staircases of the old buildings, they would not hold up long in case of fire. False fire-alarms are frequent, owing to patients breaking the glass of the switches; attendants leave doors open, and the patients thus get access to them. One patient set off the alarm in order to ask for an interview with me. Most false alarms however are due to the exposed situation of the wire, whereby sparrows and rats can pull off the insulating cotton and produce a contact. Careless workmen on the roof are at times responsible for a hurried rush from the office to an imaginary fire. Their cost prevented our protecting the wire by tubes. Most of the fires, excluding those from sparks from chimneys or from accidents in the kitchen, occur in store rooms or in single rooms. As the use of cigarettes is universal, and therefore matches are necessary everywhere, it is difficult to prevent patients from possessing them; relatives give patients matches in spite of the attendants being present; unfortunately they give patients even more dangerous articles, such as poison, knives, heavy weapons, hasheesh, opium, etc. All store-room windows are protected with fine wire gauze, in case a lighted match or cigarette should be thrown in from carelessness or with intent. But attendants allow patients to enter store-rooms, where occasionally a cunning patient, usually an old prisoner, arranges material for a fire, sets it alight and then leaves the store-room,

shutting the door. Fires in single rooms are usually made by criminals, not with suicidal intent, but to get an attendant into trouble. Thus, if the attendant is punished afterwards for carelessness in not searching his patient for matches at bed-time, the patient succeeds in his aim of venting his spite on the attendant, and is encouraged to repeat his misconduct later on. Self-mutilation by criminal lunatics is done with the same motive.

The presence of the criminal insane in the same institution with the ordinary insane at Abbâsiya has been a great drawback. Besides the sentimental objection, which in the East is apparently not great, a prison record not being such a stigma there as in Europe, at any rate among the poorer classes, the presence of criminals has warped the evolution of Abbâsiya Hospital, both structurally and administratively. Instead of gradually giving the inmates more freedom, it has been necessary to restrict the liberty of all to ensure the safe custody of the criminals, who now form half of the male population there. High walls have been built to prevent escapes, which might have been risked with the ordinary insane. All sorts of measures have to be taken to prevent cunning criminals from outwitting the staff, and not always successfully. For a time some of the criminal insane were kept in a small building at Tourah Prison, an hour's journey from Cairo. I used to inspect them there, and I had to decide as to malingering—very common in Egyptian prisons—discharges, etc., but I found it impossible to get at the facts with untrained attendants and only a short examination. And as also their control there was difficult, the doctor having little knowledge of insanity, I felt compelled to have these patients removed back to Abbâsiya to join the rest of the criminals there. As events are moving now, probably the male side of Abbâsiya Hospital will eventually become reserved for criminal lunatics only.

The difficulty of getting pure food has been throughout a source of trouble. During the war, of course, there were special troubles; contractors refused to supply, and we had to buy what we could get. But at all times a poor quality is supplied. If specifications are strictly drawn up, no offers are made, or a ring is formed, and only absurdly high tenders are made. Pure flour can be insisted on by analyzing every consignment, though in war-time it was usually mixed with maize. Milk was always adulterated, and with the present law redress was difficult to obtain; the legal standard of buffalo milk is so low that one contractor invariably watered it. Although we analyzed all milk, we always found it just above the minimum allowed by law. As a matter of fact the contractor also analyzed the milk before delivery, and added water down to the minimum. We were thus over-reached. Cereals and vegetables are supplied by contract, but often are poor though according to the specifications. Native cheese was used for some years, until analysis showed that it was a sham from a nutritive point of view. Lately the diet ration has been increased, with good results.

Since the war prevented our obtaining electric material, the dynamos at Abbâsiya Hospital have ceased working, and we depend on a company for electric light. Unfortunately it has often ceased, and the institution has been left in darkness. The risks and difficulties in managing 1,500 cases in the dark can be understood.

The high proportion of admissions to the number of beds available has been a great difficulty, not only causing a high discharge-rate of unfit cases and preventing curable cases from being treated until recovery, but keeping the Hospital full of recent cases, who have hardly time to settle down before they are turned out, only to return, in many cases, in a few months' time once more acute and unmanageable. Nearly all our work is thus undone. In some years the proportion of admissions to beds was over 100 *per cent.* at Abbâsiya Hospital, which really became a receiving-house for acute cases.⁽¹⁾ The frequent admission of *delirious fever cases* (typhus, smallpox, relapsing fever, typhoid fever, etc.) was also a cause of anxiety in such a crowded establishment, where isolation was difficult and imperfect. No instructions have yet prevented the certification as insane of these cases, though many of them could be diagnosed at sight as suffering from fever. The certification of certain anomalous cases of typhoid which begin with mental symptoms is of course intelligible; but such cases are rare. The removal to

hospital of moribund cases who die in the admission room or shortly afterwards has become rarer, but still occurs; attempts to make the certifying doctor responsible for these cases are not always successful.

Petitioning is one of the plagues of the East; every year one has to read and consider many thousands of petitions on every subject, most of them asking for discharge of patients. Thus, as soon as a murderer is interned, his relatives start petitioning, often at short intervals for many years until he is discharged or dies. No explanations will stop these petitions, nearly all of which contain gross misstatements, and on the face of them are futile, *e.g.*, a relative implores one to discharge a patient so that he may maintain his family, regardless of the fact that the patient is an idiot who has never even maintained himself, and has to be dressed and cleaned like a child; or a woman asks for her husband to be released as she wants to get him to divorce her, he being a homicidal case who would probably settle the divorce question by killing her as soon as she mentioned the subject. These petitions are sent both directly and through the Ministry, through the British Residency, etc. It is one of the habits of the East. Anonymous letters are another unhappy custom of the East, usually libellous as regards some employee, rarely threatening, sometimes merely from employees who wish to draw attention to a real or supposed injustice without incurring responsibility. One naturally feels disposed to take no notice of them, but by doing so one might lose important information which the writer of the letter is afraid to give in person. As they are often libellous, it is necessary to keep them secret, and destroy them. The attempts to write English are often just as absurd as in the case of the Indian Baboo. I have seen over thirty different titles given to me; perhaps the most ambiguous one was that addressed to "The Chief of the Fools." A petition from an Egyptian educated at a Mission School was quaintly worded: "Please give me a job, as mine is a peculiarly sad case, I am the only son of my mother, and she a virgin"!

An obstacle in the way of improving the service of the insane is the *changing and inferior nature of the attendants*. The pay is not high, though much better than formerly, and it is not possible to attract a literate class of attendant; even the chief attendant of a section is not always able to read Arabic, and cannot therefore read the directions on medicine-bottles, or enter up his daily ward-book without the aid of a literate patient. The literate class belong chiefly to the towns, and are inferior to the peasant in physique and courage; for the criminal and acute insane muscle and nerve are necessary, and the ill-developed timid townsman is of little use; hence we had to engage illiterate countrymen—often discharged soldiers.

The female attendants are of a lower class than the men; many of them are divorced women, who have children to support. They are usually ignorant of house-work, sewing, etc., and are of a noisy, quarrelsome type. Training is a slow business with the majority, and they come and go rapidly. Often they are removed by their husbands, or they re-marry, leave the service, are re-divorced and return again; but it is difficult to know who are married or divorced or single. Pregnancy also often causes their retirement. In view of Eastern customs as regards women, and the prejudice against their occupation outside their own houses, it is doubtful whether a good class of female employees will be found. For racial and religious reasons it was not feasible to replace them by Europeans or Syrians, even if women of these nationalities could be induced to live among Arab patients. Of course the female attendants cannot read or write, or even decipher the Arabic numerals on the doors. Many have to be taught how to put a key in a door. Their callousness as to vermin is a source of trouble. The fact that the whole staff of attendants is non-resident is a drawback. Early hours are difficult to enforce in some cases. Many employees walk miles and arrive already tired. The opportunities for thefts are almost unlimited, and for introducing disease.

The character of some of the structural arrangements shows that they have been modified to make up for the inefficient nature of the staff.

Earlier in this paper I have referred to the *awkward situation of the Abbasiya Hospital* on military land, blocked in by the barracks, and in the middle of the British Army traffic, and near the rifle butts, so that the noise of rifle firing is unpleasantly obvious, while the roar of aeroplanes at times drowns our voices. This position has caused many conflicts and much waste of time in correspondence, amounting to perhaps thousands of letters.

Access to the new Hospital at Khanka had long been *difficult*, and a proper road was not provided until late in 1920, after a delay of eight years from the date of the opening of the institution. Four years ago a soft mud road was marked out, bridges made, and some rough stone put down in places; but for many days in the year the road was impassable. It was always very rough. When the Hospital was built it was intended to use the train service; the Railway Administration, however, refused to allow the insane to travel in the suburban carriages to Khanka; also there are scarcely any through trains to Khanka, a change and delay occurring at Marg Station, half-way to Cairo. Very few trains run on this line, and the station is half a mile from the Hospital, so that the train service is of little use except for goods. For years we used a mule-trolley on a light Decauville tram-line from Khanka to Marg, where the frequent suburban service begins; and then trolleys on the Government Railway line were brought into use—both slow and troublesome expedients. This lack of proper access prevented patients from being sent from their homes directly to Khanka. For some years they had still all to be sent to Abbâsiya, whence a special train periodically took batches of them to Khanka—a laborious system, which kept Abbâsiya Hospital burdened with the work of admitting over a thousand cases a year, not to mention the inconvenience to the staff at Khanka, who could only get to Cairo by train at awkward hours.

For many years a great obstacle to the development of lunacy organization and expansion was the *fact that it formed merely a part of a larger technical department*, which administered quite a different subject, *viz.*, the Public Health Department. So long as lunacy work was not subjected to the technical regulations of the department, little harm was done. But after the year 1907 a new policy was initiated whereby the hospitals for the insane were placed under a junior official who administered all the hospitals of the department, and the regulations as to hospitals were held to apply to the Hospital for the Insane, notwithstanding its different aims, patients and conditions.

As stated above in my review of the year 1914, a stand had to be made, and freedom from outside interference had to be insisted upon, after seven years of disputes and correspondence.

RÉSUMÉ OF STATISTICS SINCE 1895.

A *résumé* of the statistics of the past twenty-eight years may throw some light on lunacy as it exists in Egypt; and the prevalence of certain forms of insanity may be demonstrated. The statistics of recoveries are valueless, as only in a fraction of the total could cases be kept until recovery; and to certify recovery a short stay as a convalescent is necessary—an impossibility, however, in overcrowded hospitals. In view of the local law, it is important to be sure of recovery before so certifying, as in case of the individual's committing a crime shortly after discharge it might be difficult to prove a relapse. The crime-rate being very high in Egypt, a large number of people either when insane or after recovery become guilty of offences against the law.

An examination of the table on p. 387 brings out the rise in the number resident, which has surpassed the number of beds provided for the last twenty years.

The rise in the admission-rate in twenty-eight years is seen to be about 100 *per cent.* This is in great part due to changes in the administrative orders. Nowadays stricter orders are given to the police to remove lunatics who cause disorder and annoyance, as well as those actively dangerous. The increase of admissions should not be taken

Statistics of 28½ Years, January 1, 1895, to March 31, 1923.

Year.	Beds existing at beginning of year.	Number resident at beginning of year.	Excess resident at beginning of year.	Annual admissions, excluding transfers.			Number discharged uncured. (Cases.)	Pellagrous admissions. (Cases.)	General paralytics admitted. (Cases.)	Deaths.	Death-rate per cent. on average number resident.
				From town. (Cases.)†	From country. (Cases.)	Total cases.					
* 1895 .	300	440	140	369	157	526	130	1	19	77	16½
* 1896 .	370	488	118	259	166	425	220	8	29	81	17
1897 .	420	417	—	370	167	537	197	23	27	79	18½
1898 .	430	417	—	379	212	591	353	39	34	57	13½
1899 .	453	425	—	380	218	598	274	33	35	76	15
1900 .	474	494	20	433	230	663	403	35	38	81	16
1901 .	500	495	—	295	266	561	389	33	25	75	15·8
* 1902 .	500	451	—	194	214	408	176	31	15	67	14·7
Persons.											
† 1903 .	500	489	—	262	233	524	329	52	35	79	15½
1904 .	500	516	16	261	216	499	180	53	27	72	12½
1905 .	512	641	129	339	233	619	392	65	34	99	15
1906 .	512	663	151	276	248	563	316	124	33	76	10·8
1907 .	640	750	110	321	269	613	294	89	30	79	9½
1908 .	877	896	19	311	262	593	266	88	33	107	11
1909 .	877	1,017	140	292	268	578	175	101	37	108	10
1910 .	947	1,150	203	430	307	772	327	109	50	126	10·2
1911 .	1,007	1,304	297	422	381	870	522	107	40	160	12
‡ 1912 .	1,007	1,327	320	449	412	913	259	136	34	217	14
1913 .	1,390	1,651	261	453	386	868	214	145	51	213	12½
1914 .	1,390	1,793	403	539	435	1,034	297	176	50	224	11·3
1915 .	1,550	2,016	466	489	384	1,036	487	135	57	224	11
1916 .	1,550	2,055	505	457	434	1,344	575	179	70	244	11·2
1917 .	1,550	2,081	531	120	119	301	131	61	24	75	14·4
§ Jan. 1 to Mar. 31	1,550	2,081	531	120	119	301	131	61	24	75	14·4
¶ 1917 .	1,550	2,104	554	514	516	1,219	537	223	61	369	17·4
1918 .	1,550	2,118	568	465	567	1,203	489	193	40	450	21
1919 .	1,550	2,075	525	399	461	919	430	133	43	250	11·9
1920 .	1,581	2,109	528	487	605	1,169	707	178	51	210	9·7
1921 .	1,581	2,195	614	500	486	1,069	529	155	32	227	10
1922 .	1,841	2,364	524	504	494	1,073	527	186	27	188	7·6
On Apr. 1, 1923)	1,841	2,491	—	—	—	—	—	—	—	—	—
Totals .	—	—	—	10,969	9,346	21,088	10,116	2,891	1,081	4,490	—

* Cholera years, when admissions were suspended for a time.

† From the year 1903 onwards, the admissions from towns and from the country and the admissions from pellagra and general paralysis are given as "persons," not "cases." The latter term sometimes refers to the same patient admitted more than once during the year. Column 6 continues to refer to cases, and therefore exceeds the total of columns 4 and 5.

‡ Until 1912 the statistics refer only to Abbāsiya Hospital. In 1912 Khanka Hospital was opened; during the period 1912-1916 it only admitted transfers from Abbāsiya Hospital, but from April 1, 1917, it took "direct" admissions.

§ In the years 1915-1918 the statistics of British soldiers treated at Abbāsiya Hospital are included in columns 2, 3 and 6.

¶ In the year 1919 the riots suspended admissions from the provinces for some months.

NOTE.—Since April 1, 1917, the year is reckoned from April 1 to March 31 (like the financial year). Thus the year 1920 runs from April 1, 1920, to March 31, 1921; and the total annual admissions, therefore, do not correspond with the table showing the admissions monthly (p. 392) from January 1, 1917, onwards.

as any index of an increase in the amount of insanity occurring in the country. The same phenomenon is observed in every country where an attempt is made to house the insane. It is really merely a mark of advancing civilization; also, as milder methods are used in hospitals, people more readily send their insane relatives there.

The rise in the number of pellagrins admitted annually from 1 to 186 is partly explained by the ignorance of the observers in the beginning; later on, the great rise in provincial admissions caused an increase of pellagrins, this disease occurring only in country districts. It accounted for 2,891 admissions in twenty-eight years.

The lowering of the death-rate from 33 *per cent.* in 1894 to 7.6 *per cent.* in 1922 has had a great effect in increasing the overcrowding of the hospitals for the insane. The extraordinary rise in the death-rate during the last two years of the war, owing to poor food supplies, and its fall in 1919, when extra diet was provided, are similar to the experience in English mental hospitals.

Assuming that the death-rate in Egypt generally was 2.64 *per cent.* in 1922, as it was in 1921, the death-rate in the Egyptian hospitals for the insane in 1922 was less than three times that of the general death-rate of the country. In England the general death-rate in 1922 was 1.24 *per cent.*, while that of the English county and borough mental hospitals was 9, *i.e.*, seven times the general mortality-rate in England. While the general death-rate in Egypt was more than double that of England, the death-rate in Egyptian hospitals for the insane was lower than that of English county and borough mental hospitals.

General statistics.—The number of patients in residence has risen from 440 in 1895 to 2,491 on March 31, 1923.

21,088 cases have been admitted to the hospitals for the insane, of which 19,250 were received at Abbâsiya, and 1,838 were received at Khanka Hospital; the latter hospital also received 2,170 cases transferred from Abbâsiya. 4,490 deaths have occurred.

1,081 general paralytics have been admitted; the ratio of this disease to the total admissions is much lower than in England.

10,116 cases have been discharged still insane, usually for want of room.

Formerly the large towns, containing an aggregate of 1,358,000 inhabitants, supplied twice as many patients as did the provinces, containing 11,353,000 inhabitants, and in the twenty-eight years the towns actually sent more cases than did the provinces (towns 10,969, and provinces 9,346). Even now the ratios of annual admissions to populations are widely different, being 1 to 2,788 of the population

in the towns and 1 to 18,765 in the provinces. Thus, the rate in the towns is seven times as high as in the provinces. This difference in the admission-rates must not be taken as an index of the rates of insanity occurring in towns and provinces. Much of the discrepancy between the ratios is due to the fact that in towns the police at once arrest wandering lunatics. In the villages they are not arrested until they cause trouble. In the towns a wandering lunatic would be a nuisance in the rapid traffic and in crowded streets. In the fields he is scarcely noticed. Also, a number of provincial cases are admitted as town cases, because they first come to towns for treatment, or to be blessed at the mosques there, and after a time are certified as town cases. The increase of late years in the number of provincial admissions accounts for much of the total increase of admissions.

353 Government employees have been examined mentally.

328 reports have been sent to Maglis el Hasby as to the interdiction of patients.

L.E. 146,000 have been collected from patients' relatives for the cost of treatment; and the annual receipts from this source have risen from L.E. 16 in 1894 to over L.E. 12,000 in 1922.

The annual cost of upkeep of hospitals for the insane has risen from L.E. 8,000 in 1895 to L.E. 116,526 in 1922.

The total expenditure for the upkeep of hospitals for the insane, excluding construction, has been L.E. 1,228,776.

The expenditure on hospital buildings has amounted to L.E. 414,038.

The hospitals' staff has risen from 73 in 1895 to 698 in 1923.

The area appropriated to the use of the insane has been increased from $2\frac{1}{2}$ to 750 acres.

During the twenty-eight years four suicides and nine homicides have occurred in the hospitals, and eight other patients have died from various accidents (choking, swallowing stones, falls, etc.).

About 600 insane cases pass through the general hospitals of the towns and provinces annually; about half this number are certified and sent to the hospitals for the insane, while the other half are released.

The races of the 1,022 general paralytics admitted in the 26 $\frac{1}{2}$ years 1895-1921 were as shown in the table on p. 390.

General paralysis.—In the table the Maltese⁽³⁾ take the first place for prevalence of general paralysis; 18 per 10,000 of the colony acquired general paralysis in the 26 $\frac{1}{2}$ years, and 20 *per cent.* of their total insanity is due to general paralysis. Thus the idea that the syphilis prevalent in Egypt may be a special variety of the disease, because it produced so few general paralytics amongst the Egyptians,

is not strengthened by the fact that the Maltese Colony, subject to the same variety of syphilis as the Egyptians, suffer from general paralysis perhaps as frequently as in Europe.

The Armenians rank next with 13·2 per 10,000 of population, and 8·8 *per cent.* of their total admissions are due to general paralysis.

	No. of paralytics	Total of population	Ratio of paralytics to 10,000 of popu- lation	Total insane admitted in 26½ years	percentage of paralytics to total insane
Barberi	11	70,477	1.5	237	4.6
Egyptian	677	12,278,500	0.55	14,553	4.6
Greek	102	82,658	12.3	650	15.7
Persian	1	1,496	6.7	19	5
Syrian	36	31,225	11.5	409	8.8
Moor	(1)	-	-	-	-
French	9	8,816	10.2	89	10
Austrian	7	2,789*	25.1	60	11.6
British	9	9,042	9.9	65	13.8
Armenian	17	12,854	13.2	193	8.8
Sudanese	40	36,917	10.8	624	6.4
Belgian	(1)	-	-	-	-
Italian	36	35,519	10.1	262	13.7
German	(1)	-	-	-	-
Jewish	33	59,581	5.5	465	7.1
Bulgarian	(3)	-	-	-	-
Turk	16	26,374	6	225	7.1
Maltese	14	7,761	18	69	20
Russian	(4)	-	-	-	-
Swiss	(2)	-	-	-	-
Albanian	(1)	-	-	-	-
Serb	(1)	-	-	-	-
	1008†	12,664,009	0.8 (or 0.03 per ann.	17,920	5.6

British military patients admitted during the war are excluded from this table.

* Census figures taken during the war, when many Austrians had been deported.

† This total excludes the figures in brackets.

‡ In England (1908-1912) average ratio was 0.45 per annum.

The rate of general paralysis amongst Egyptians is very low, 0.55 per 10,000 of the population in 26½ years, although syphilis is rife in the large towns, where most cases of general paralysis occur. The fellaheen, nine-tenths of the population, seldom acquire general paralysis, and are probably much freer from syphilis than the townspeople. Yet general paralysis does affect Egyptians to a small extent, and 4.6 *per cent.* of their total admissions are due to general paralysis.

From this table it is clear that the more civilized races suffer far more from general paralysis than the backward races, as one would expect, as the former are the more completely syphilized. The apparently high proportion of general paralytics among the Sudanese (10.8 per 10,000 in 26½ years) is probably incorrect, being due to imperfect census returns, and to the inclusion of admissions from outside Egypt (Sudan).

The low rate of general paralysis among the Jews does not, I think, correspond with the statistics of other countries.

However, the peculiar racial and geographical distribution of general paralysis has not yet been explained. Why does it so rarely attack Indians and Malays, while the Chinese, especially those who live on the water at the great ports, and the Japanese are so much affected by it—the Japanese perhaps as much as Europeans are?

An examination of the origin of the 677 Egyptian general paralytics admitted in 26½ years shows that 454 came from the towns of Cairo, Alexandria, Port Said and Suez, and 228 from the rest of Egypt. The following table shows the ratio of Egyptian general paralytics to Egyptian population, and total admissions of Egyptians insane:

—	Total number of Egyptian general paralytics admitted in 26½ years.	Total Egyptian insane admitted in 26½ years.	Egyptian population.	<i>Per cent.</i> of Egyptian paralytics to total Egyptian insane admitted.	Ratio of Egyptian paralytics admitted to Egyptian population per 10,000.
Four towns .	454	7,291	1,093,395	6.22	4.1
Rest of Egypt.	228	6,124	10,789,633	3.72	0.21

Thus, Egyptians living in these four towns, where nearly all the Maltese live also, had only 6.22 *per cent.* of their insane admitted suffering from general paralysis, while the Maltese had 20 *per cent.* And town Egyptians produced only 4.1 cases of general paralysis per 10,000 persons in 26½ years, against 18 per 10,000 produced among the Maltese population.

The numbers of patients admitted in each month during the 27 years 1895-1921 to the two hospitals were as follows :

	Total admitted.	Average per month.
January . . .	1,317	48·8
February . . .	1,406	52
March . . .	1,857	68·8
April . . .	1,925	71·3
May . . .	2,234	82·7
June . . .	2,084	77·2
July . . .	2,108	78
August . . .	1,750	64·8
September . . .	1,608	59·5
October . . .	1,618	60
November . . .	1,442	53·4
December . . .	1,381	51
Total . . .	20,730	64

Transfers are excluded.

Until April, 1917, all new cases were admitted to Abbâsiya Hospital.

Seasonal variations in admissions.—The preceding table shows the rapid rise in the admissions when the dry hot spring season begins, with its acme in May and early June—a period when the khamseens (hot, dry, dusty south winds) blow at intervals, the intervening days being cool and even chilly. Later, as the Nile rises the air becomes damper, with north winds, and although the average temperature becomes considerably higher than in May, there are usually no record high temperatures and the admission-rate falls, and more rapidly still in September, which has a higher average temperature than May, but is damper.

There is no doubt but that the excessive dry heat of the spring and early summer is an important factor in causing the admission-rate to rise; *e.g.*, in some years the number certified in May or June is nearly three times as high as that in January. The curve of admissions follows the temperature curve, but is modified by the humidity, as may be seen on our charts. The excessively dry sand-laden gales of spring seem to have an irritating effect on the nervous system. It is not merely the heat of the wind that irritates, because a damp heat produces a very different feeling of depression and lack of energy, while the khamseens make some people irritable, excitable, restless, and lacking in self-control; to some people they act as a mental stimulant, and such people get through more mental work during a khamseen than on other days.

1920.	May.	September.
Mean temperature, Centigrade	20·5	23
Humidity <i>per cent.</i> . . .	54	72

In a khamseen the humidity of the air drops to as low as 5 *per cent.* and the barometer falls rapidly. Owing to the extreme dryness, electricity is produced easily by friction, *e.g.*, of the hair by brushing. I suspect that the nervous irritation is due to some electrical change in the dry air. There are a number of people who have attacks of insanity every spring, but recover when the air becomes damper, though just as hot, when the Nile rises. There are others who break down every year with an attack of recurrent mania when the cold weather commences. I am unable to explain these latter cases.

The great variation of the admission-rate during the year enhances the difficulty of finding room in crowded hospitals for the new cases. The sudden rise of 50 *per cent.* in the admissions as the weather becomes warmer causes the rapid discharge of uncured cases, and keeps the hospitals most crowded at the time of the year when the patients are most excited, and require room most, and when fewest recoveries occur.

It is interesting to note that the number of murders committed in Egypt varies with the weather, being lower in the cool months, rising in the hot months, and falling off as the air becomes cooler. The following figures showing the total number of murders committed in Egypt during the past ten years, month by month, were furnished by the courtesy of the Public Security Department :

—	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sep.	Oct.	Nov.	Dec.	Total.
Murders committed in 10 years	565	569	792	784	835	914	1,105	992	882	825	713	626	9,602
Average annually	56.5	56.9	79.2	78.4	83.5	91.4	110.5	99.2	88.2	82.5	71.3	62.6	960

A comparison of these figures with the totals to the table on p. 392 shows that the murder rate rises suddenly in March just as the insane rate does, but reaches its climax in July, while that of insanity is already higher in May than in July, and is nearly as high in June as in July. As the Nile rises in August, both rates fall.

The forms of insanity of convicts admitted to Abbâsiya Asylum in ten years, 1912-1921, and of accused persons in sixteen years, 1906-1921, were as follows :

	Convicts. 1912-1921.	Accused. 1906-1921.
Senile insanity . . .	1	28
Imbecility and idiocy .	7	87
Melancholia . . .	12	43
Pellagra . . .	58	213
Hasheeshism . . .	7	90

	Convicts. 1912-1921.	Accused. 1906-1921.
Mania	22	62
Paranoia	1	41
Secondary dementia	9	133
Epilepsy	10	38
Dementia præcox	9	56
Alcoholism	1	33
General paralysis	7	31
Weakmindedness	12	130
Organic dementia	1	2
Confusional	3	3
Various and still under observation	1	8
Total	161	998
Not insane	83	212
Total	244	1,210

The figures in the second column include also convicts admitted between 1906-1911.

The offences of 1,063 accused persons admitted during the sixteen years 1906-1921 were as follows :

Murder	147
Attempt or threat to murder	144
Assault	104
Theft	364
Sexual offences	10
Arson	51
Kidnapping	10
Destroying property	22
Forgery, swindling	15
Blackmail, slandering	10
Trespassing	31
Vagrancy	77
Escape from supervision	42
Indecency	11
Minor offences	25
Total	1,063
Not insane (1912-1921).	147
Total	1,210

During the years 1906-1911 (inclusive) accused and convicted lunatics are not differentiated in the statistics, and cases found not insane are entered under the offence headings.

Beginning with the year 1912, convicted cases are excluded from these statistics, and *not insane* cases are not entered under the offence headings.

Note on criminal statistics.—As the method of keeping the records of criminal lunatics has been changed at certain epochs, it is impossible to make a complete table for the twenty-eight years.

The figures of the first year, 1895, are not given, as criminal lunatics were not recognized as such at that time. The classification of offences and forms of insanity was not commenced until 1896.

In the twenty-six years 1897 criminal lunatics have been admitted to Abbâsiya Hospital, which has special sections for criminal lunatics. In the ten years 1912–1921, 965 criminal lunatics were admitted, *i.e.*, an average of 96·5 a year. 295 out of 1,454 criminal lunatics admitted between 1906–1921 were found to be sane, *i.e.*, 1 in 5, a very high proportion. The sanity-rate is particularly high among alleged lunatic convicts—83 out of 244 (1912–1921). The question of insanity is often raised with very slight reason; and many accused are brought for examination, although they never offered such a plea.

As to the 1,063 offences committed by accused lunatics in the period 1906–1921,⁽³⁾ 364 were thefts, often due to the lunatic's possessing no means or friends, and being forced to help himself. Many lunatics wander at large in the East, and live by begging and pilfering. Many thefts also are committed by weakminded habituals, on whom imprisonment has no effect, and who, unable to endure prison discipline, are passed to an asylum. There were 147 murders and 144 attempted murders by lunatics in the sixteen years. As the general murder-rate in Egypt was 1 per 10,000 people in 1920, the number of murders by lunatics is not astonishing.

[Egypt's murder-rate is, however, a fraction of that of some partly negro towns in the southern States of the U.S.A., *e.g.*, Memphis, where the annual murder-rate is nearly 1 per 1,000 of the population.]

Several of the insane murders in Egypt might be called preventable, the perpetrator having been known to be insane, and often having committed assaults previously, but indifference prevented proper steps being taken in time. Arson is a very common crime among the fellaheen, usually from motives of revenge. The lunatic guilty of this offence is usually the wandering imbecile who has been illtreated or refused food, or the pellagrin who has attributed his malady to sorcery or poisoning by a neighbour, or the weakminded man. Kidnapping is usually done out of spite, also the destruction of cotton crops or other property by the same class of patient. Vagrancy and escape from police supervision are the offences of the chronic neglected insane, who are unable to earn their livings and are frequently in the hands of the police. Thousands of cases discharged uncured are thus liable to fall into the clutches of the law. Assaults are frequently committed by toxic and maniacal lunatics, who break out suddenly and attack their neighbours.

As to the most frequent mental disorders present, weakmindedness (130) is a very common type. No doubt in Egyptian prisons, as in other countries, there is an important percentage of weakminded prisoners who could more properly be managed away from prison surroundings. They are unable to support prison discipline, and many do not deserve it, their responsibility being very limited. Secondary dementia (133) is as common a form, and many cases of this disease are in fact patients turned out of the hospitals for the insane uncured, only to return as criminals after committing thefts, etc. General paralytics (31) are usually arrested on account of thefts, often repeated—unconcealed thefts of several similar articles; thus, one case kept stealing all the barrows he found in the road; another pilfered all the parcels he found in a shop. They also commit crimes of violence, as do the epileptics (38), who have a high murder record.

The pellagrous (213) top the list, as might be expected, since pellagra is the commonest form of insanity in Egypt. They commit many murders owing to their persecutory delusions, which are often an attempt to rationalize their painful and peculiar sensations. One symptom, impotence, appears to be usually attributed to sorcery, and the murder of the supposed sorcerer often results.

The hashasheen (90) commit thefts and acts of violence, murders, etc.

An examination of the separate statistics for convicted lunatics for the period 1912–1921 (244) shows the high proportion of pellagra among these prisoners; 58 out of 161 found insane were pellagrous. No doubt some of them suffered from pellagra before conviction, but not all.

Criminals resident.—The number of criminal lunatics (accused and convicted) in residence in Abbâsiya Hospital on November 6, 1921, was 420 males and 43 females, of whom 48 males and 5 females were convicts, and 7 political prisoners.

The table on p. 397 gives the proportion of insane to the total population of each race admitted in the twenty-seven years ended December 31, 1921. The figures of the population are those of the census of 1917.

In contrasting the insanity rate of Egyptians with that of non-Egyptians, it is to be remembered that the latter are chiefly town-dwellers, and that therefore their insane would more invariably be sent to hospital than the insane among the Egyptians who chiefly inhabit the country districts, where the insane can be left at large to a great extent.

The numbers of the insane admitted of several races is too small to allow of any deduction being drawn with safety.

Of the races whose populations exceed 5,000 in number, the highest rate is seen to be among the Sudanese (negroes), who are great drunkards besides using hasheesh. They withstand the vices of town-life badly; there is said to be little insanity in the Sudan. Probably the census statistics of the total Sudanese population of Egypt is too low and many Sudanese may have registered themselves

as Egyptians. Also some Sudanese cases sent from the Sudan are included in these figures.

The Armenians come next with a rate of over 5½ per 10,000 per annum—nearly

RACE.	Total Population.	Cases in 27 Years.	Approximate Rate per 10,000 for 27 Years.	Rate per 10,000 per Annum	REMARKS.
Mohamedan Egyptian and Beduin ...	11,444,036	14,185	12·4	0·46	
Copt Egyptians...	834,474	1,138	13·63	0·5	
Turks ...	26,374	226	85·69	3·17	
Maltese ...	7,761	71	91·5	3·4	
Berberis ...	70,447	237	33·64	1·24	
Sudanese ...	36,917	627	169·3	6·27	
Moors, Tunisians, Algerians ...	5,209	60	—	—	The census statistics refer only to French protected subjects.
Persians ...	1,496	19	127	4·7	
Indians ...	954	12	125·7	4·65	
Swiss ...	622	13	209	7·7	
Spanish ...	1,693	11	65	3·4	
Syrians ...	31,225	417	133·5	4·94	
Armenians..	12,854	200	155·6	5·76	
Abyssinians ...	?	30	—	—	Census statistics unreliable.
British ...	9,042	67	74·1	2·74	
Belgian ...	518	5	96·5	3·57	
Chinese ...	?	1	—	—	
French ...	8,816	92	104·35	3·86	
Italian... ..	35,519	272	76·57	2·83	
American ...	514	3	58·3	2·16	
German ...	157	19	—	—	Census statistics unreliable owing to war.
Austrian ...	2,789	60	—	—	
Greek ...	82,658	664	80·33	2·97	
Russian ...	4,225	20	—	—	
Bulgarian ...	246	5	—	—	
Serb ...	252	8	—	—	Census statistics unreliable owing to war.
Roumanian ...	895	3	—	—	
Albanian ...	?	1	—	—	
Dutch ...	706	3	—	—	
Jews ...	59,581	485	81·4	3	
TOTAL ...	—	18,958	—	—	

as high as the rate in England and Wales in the year 1920 (6 per 10,000). The pre-eminence of the Armenians in this respect has been noted on former occasions. Their prolonged persecution and harassed lives may explain their liability to become

insane. Persecutory ideas are constant features of their insanity, and after each massacre we get insane refugees, whose minds have given way under their sufferings. They are, however, innately predisposed to insanity, and hereditary influence is comparatively more often seen among them than in any other race.

The Syrians come next with nearly 5 per 10,000. They are mostly Christians, use alcohol, and live in the towns.

The French, with a rate of 3.86 per 10,000, come next. These figures include patients of French race, and exclude French-protected subjects (Algerians, etc.).

Next come the Maltese with 3.4 per 10,000. This race has always had a high insanity-rate in Egypt, and I believe that in Malta itself the rate is high; general paralysis caused 20 *per cent.* of their admissions.

The Turks come next with 3.17 per 10,000. Probably the rate of the Turkish race is really lower, as in the census statistics many Turks are doubtless concealed under other headings.

The Jews come next with 3 per 10,000—just a shade more than the Greeks. As has been noted in other countries, Jews have a high insanity-rate. General paralysis accounts for only 7.1 *per cent.* of their admissions.

The Greeks come next with nearly 3 per 10,000. Alcohol and syphilis are great factors in giving this high rate. The Greeks furnish 10 *per cent.* of the total number of general paralytics admitted, and 15½ *per cent.* of the Greeks admitted suffered from general paralysis (*see* table of statistics concerning general paralysis).

The Italians come next with 2.83 per 10,000, and then the British with 2.74—a much lower rate than in England. As a matter of fact, only a portion of the British cases occurring are brought to hospital; some are sent directly to England.

The high rate of the Berberis, 1.24 per 10,000, compared with other Egyptians is explained by the numbers who come to the towns of Lower Egypt as servants, and acquire the vices of town-life. Large numbers take to drink; they also acquire syphilis and so suffer from general paralysis.

The Egyptian Copts (0.5 per 10,000) show a higher rate than their Mohammedan neighbours—0.46 per 10,000—although they appear to be subjected to similar conditions, and are distributed in town and country very much as the Mohammedans are, except that the proportion of Copts is much higher in Upper Egypt than in Lower Egypt or in the big towns. The Copt is far more frequently educated than the Mohammedan (256 to 116 for men, and 51 to 7 for women).

The rate among Mohammedan Egyptians, the great bulk of the nation, appears to be very low; but of course these figures only show a fraction of the insanity annually occurring. Only the worst cases are taken to hospital. If, however, we take the town of Cairo (population 790,939, including 631,103 Mohammedans), we find that of 420 cases admitted from it in 1920, only 342 really belonged to Cairo, of whom 254 (152 males and 102 females) were Mohammedan Egyptians—*i.e.*, at the rate of 4 per 10,000 Mohammedans in Cairo.

246 males and 174 female case were admitted from Cairo to Abbâsîya Hospital in the year 1920; but 62 of the males really belonged to the Provinces, and were sent on to Khanka Hospital—the proper destination of provincial male cases; also 16 women were found to belong to the provinces, though certified in Cairo. Thus, 184 male cases and 158 female cases occurred in Cairo. The total population of Cairo, all races included, being 405,848 men and 385,091 women, the proportion of occurring insanity in 10,000 men of all races in Cairo is seen to be 4.5, and in 10,000 women to be 4.1. (Compare 6.2 per 10,000 in England⁽⁴⁾.) I can give no idea as to the insanity-rate in Egypt generally. But at the census of 1917 the population of Egypt was 12,750,000, and 1,219 people were certified in that year, *i.e.*, nearly 1 per 10,000 living. 14,387 inhabitants were returned as insane in the census of 1917, *i.e.*, a little over 1 per 1,000 living. In England, in 1920, 120,344 persons were registered as insane by

the Lunacy Commissioners, out of a population of 36,000,000, *i.e.*, 3·3 per 1000; but many other insane persons were not registered, as they lived at home.⁽⁵⁾

In 1920 the population of Egypt was estimated to be 13,225,000; the number of insane certified during the year was 1,169, *i.e.*, 0·88 per 10,000. In England in 1920 the rate of certification was 6·2 per 10,000. Much of the disparity in the rates of the two countries is due to the different customs as to internment of the insane. But, making allowance for that factor, there is evidently a higher rate in England.

Is the low rate of insanity of the Egyptians a racial characteristic? The fact that the insanity-rate for Egyptians generally, 1 per 22,000, alters to 1 per 2,500 in Cairo, makes me think that the low general rate is chiefly due to the simple life of the fellah.

DESCRIPTION OF HOSPITALS IN 1923.

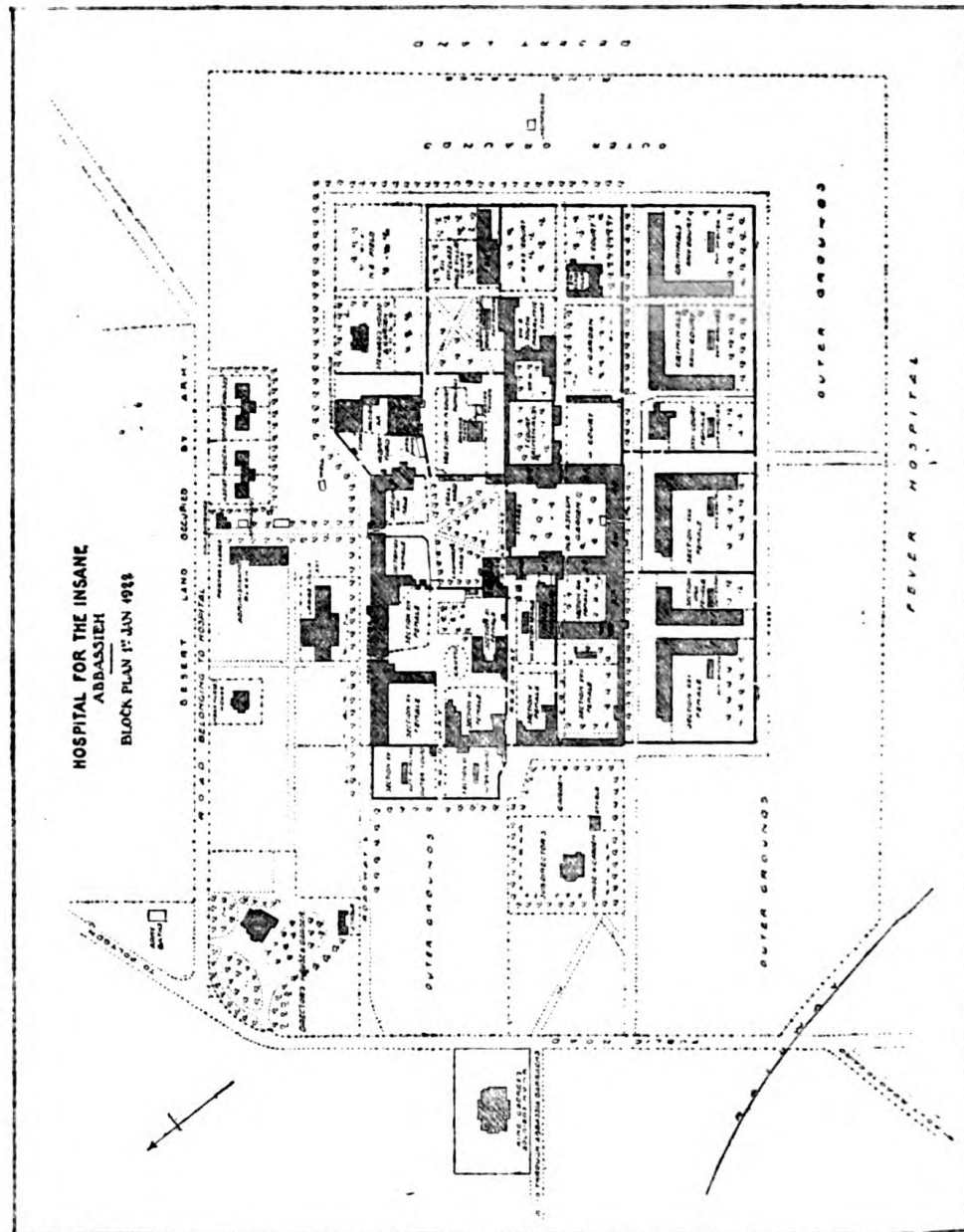
The two Egyptian State Hospitals for the Insane are situated on the Eastern desert that fringes the Nile valley, one at Abbâsiya, just outside Cairo, four miles from the Nile, and the other eleven miles further out at Khanka. The Abbâsiya Institution has a capacity of 1,241 beds (553 male, 688 female), while Khanka holds 600 beds (males only). Each hospital holds some hundreds of patients in excess, so that in fact 2,491 patients were in residence, 1,483 at Abbâsiya, 1,008 at Khanka) on April 1, 1923. Abbâsiya Hospital receives all the female admissions, also all criminals (accused and convicted), also all paying patients, including most of the European patients.

Khanka Hospital receives all non-criminal pauper male patients from all over the country. Motor ambulances remove patients from the Cairo police stations, and from the railway station when they come from localities outside Cairo, to the two hospitals, the journey to Abbâsiya taking a quarter of an hour, to Khanka about an hour.

Abbâsiya Hospital, which now suffers little from the adjacent old Cairo sewage depôt, is situated next to the Cairo Fever Hospital—another unwelcome neighbour. Numbers of other hospitals are built on the Abbâsiya desert on the Cairo side, while acres of barrack-buildings intervene between the Hospital for the Insane and the nearest suburb, Abbâsiya. Tents and barracks block the north and west aspects, railways and the Fever Hospital fill the south side, while the east aspect leads to the open desert—an unfortunate position for such an institution.

Abbâsiya Hospital consists of a series of one-storeyed sections grouped around a central two-storeyed building, the old palace, with a row of old barrack buildings (the old Military Hospital) on its north

façade. It is surrounded by walls fifteen feet high on account of its being the criminal asylum, and it is prison-like in appearance. The internal roads are lined with trees, and the thirty airing-courts have



either trees or sun-shelters. Hedges conceal the railings around many of the airing-courts. The western half of the site is occupied by the Harem, but many of its sections show by their position that they were formerly a part of the male side.

The enclosing wall of the Hospital is separated from the public by an area of desert fenced in by iron railing, so that there is a distance of a hundred yards between the outer fence and the airing-court walls. In this outer area are situated the houses of the chief officials, also an administrative block containing hospital offices, pharmacy and the Lunacy Division Office, also a porter's lodge with key-room and attendants' lockers, where uniform is donned by them before taking duty. All attendants live in the town. Another building in a garden exists in this outer area—the villa for paying female patients.

Within the walls the buildings are arranged in four irregular rows from east to west, the main roads running in a similar direction between them. Shorter roads from north to south also divide the buildings. The southernmost row of buildings consists almost entirely of L-shaped sections containing single rooms, usually sixty rooms in each section, for the management of dangerous, criminal, and noisy cases. Just north of these buildings is the old palace with two storeys. Its upper storey is arranged as six sections for male criminals, the downstairs rooms being the dining rooms. The north-west end of the building is used as a central kitchen, and adjoining it is the laundry. The eastern limb of the building has two airing-courts on its outer side, and two sections are thus arranged for male admissions and restless cases.

On the east of the old palace lie the male infirmary and the male paralytic section, and the two male villas, one for first-class patients, who pay eight shillings a day, and one for second-class patients, who pay four shillings a day. On its north are the food stores, laundry yard and water-tower. On its west and north-west lie the Hareem sections and gardens. Further north the old Military Hospital buildings have been separated into a number of sections for patients who do not require single rooms. The old detached buildings at their eastern end are used as equipment stores, a residence for an electrician and a section for feeble cases.

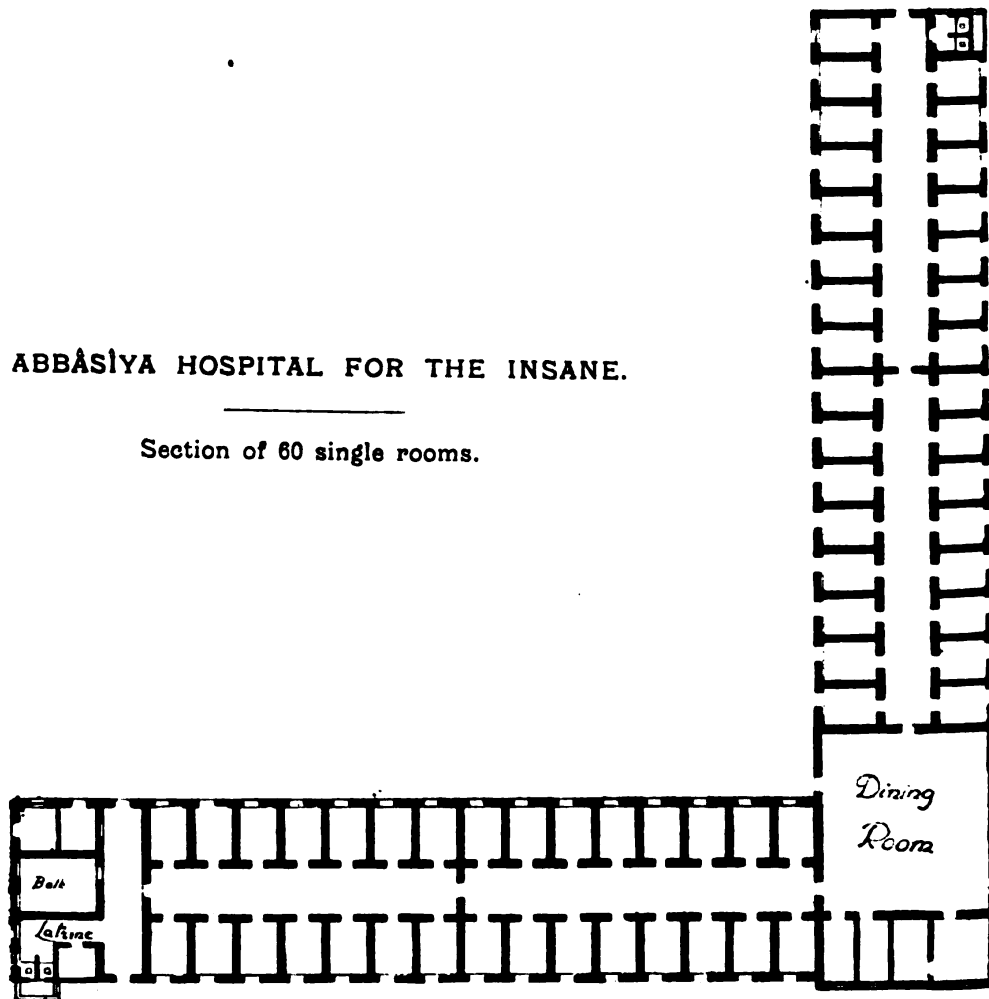
The entrance is on the north side. Trees screen the walls on the north and western sides.

The thirty-one sections inhabited by the patients vary greatly in structure and convenience. Those adapted from the old palace buildings and from the old Military Hospital are cramped, and often shabby, and in some cases are incapable of repair owing to faults in the original design. Many have decaying pavements and roofs, and such sections are only kept in use until a third hospital is built. The sections of the southernmost line are modern, airy, and solidly built. The floors are of polished lignolite; the walls are painted and rendered in cement to a height of two metres; all corners are rounded, and ample ventilation is provided.

Each section is a small hospital in itself, having an office, small pharmacy, food store, clothing store, bath-room with hot-water supply, dining-room, dormitories, latrines, and large airing-court. Each section is connected with the administrative building by telephone. It has one or two stations of the electric control clock, and

ABBÂSIYA HOSPITAL FOR THE INSANE.

Section of 60 single rooms.



a switch to the fire-alarm indicator. It has no kitchen, and usually no bed-rooms for the day staff; one of the latter, however, remains at night to sleep in each dormitory as a reserve. In the section office is kept a duplicate case-paper for each patient so that the medical officer can note down at the time what the patient states during examination. A list of suicidal and dangerous patients hangs on the wall, and shows the marks of the attendants' seals impressed twice a day. Equipment-inventories, diet-sheets, ward-reports and lists of various kinds classifying the patients are kept in the section office.

Very little furniture exists in the ordinary sections; only broad heavy benches on which the patients sit cross-legged, and white tables occupy the dining-rooms. In the dormitories are copper-wire meshed bedsteads, which resist badly the active habits of the Egyptian insane, and are frequently broken. The mattresses are filled with hay or vegetable-fibre; the rest of the bed-clothing is as in England, but the strong rugs are not of double thickness, and are not quilted. There are no padded rooms. There are 435 single rooms (male 188, female 247). This shows that about one-fourth of the patients sleep in single rooms at night. Unfortunately a far higher proportion are too noisy and restless to be fit for associated dormitories, yet perforce remain there.

The three villas for paying patients are fitted up with divans, carpets, curtains, chairs, etc., and are like small hotels. They have separate kitchens and a supply of special rations. They have shady gardens.

The cost of the construction of the Abbâsiya Hospital up to March 31, 1923, was L.E. 179,395, *i.e.*, about L.E. 144½ per bed.

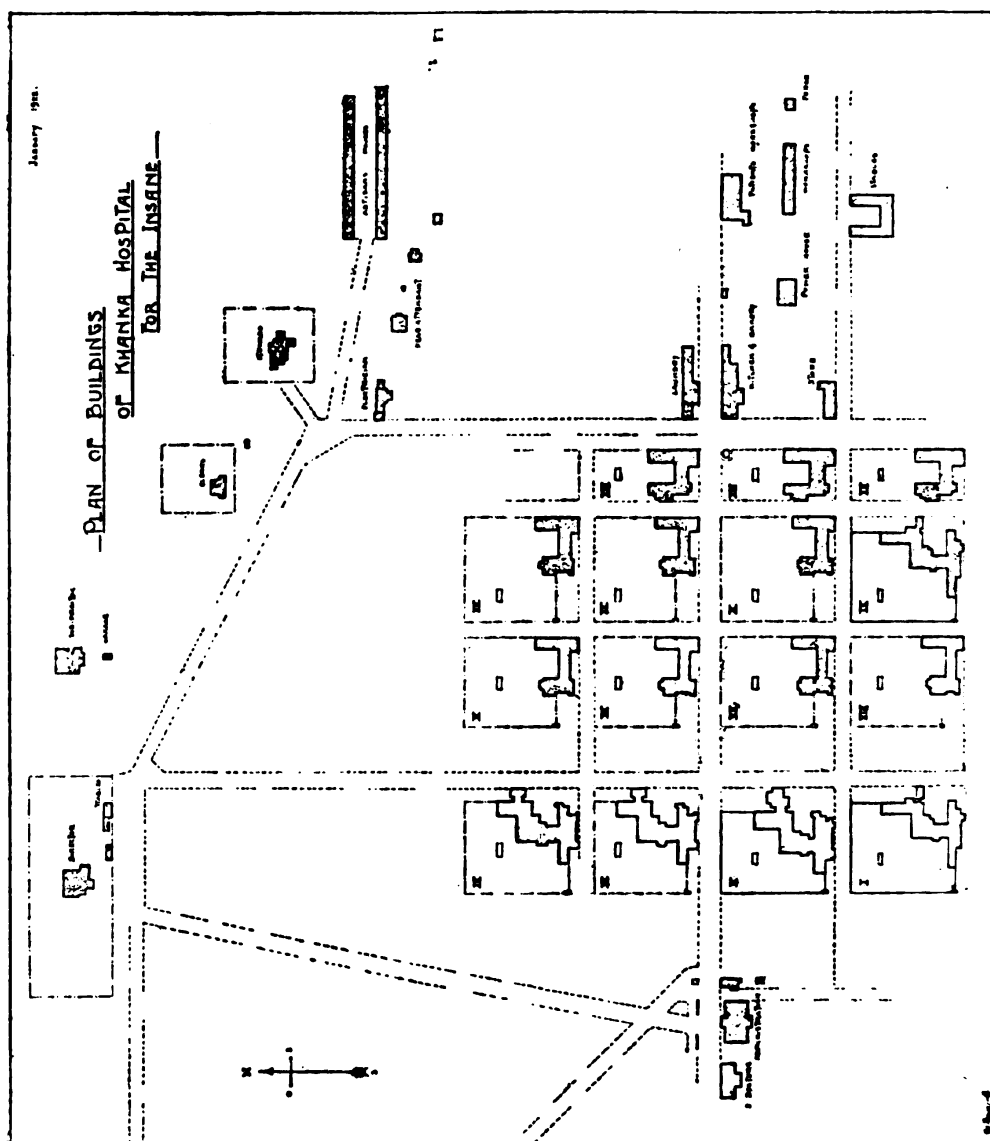
The Hospital for the Insane at Khanka has an area of about a square mile. It consists at present of 15 sections, distributed over the highest portion of the area, and occupying, with their courts, about 50 acres. Eighty-five single rooms are provided. Administrative buildings, residences for many of the staff, including twenty-nine cottages for mechanics, etc., are placed to the north. A large water-tower has been built, and water is pumped from several wells. The drainage is pumped to a septic tank, and after treatment there is used to irrigate vegetable gardens.

Very wide roads (15–20 metres), which intersect at right angles, pass on all sides of the sections and airing courts. All roads are lined with trees, and the courts, each of about half an acre in area, are similarly provided. Much of the estate, although on the desert, is a mass of green with white buildings showing among the trees. The buildings are made of sandbricks unplastered.

There is a power-house with three oil engines⁽⁶⁾, which work dynamos. The electricity so produced furnishes electric light, pumps water and sewage, makes ice, works the alarm-bell, and supplies laundry and workshop motors. Another oil engine pumps water directly from a well. Cooking is done by means of steam boilers, which also supply hot water to the laundry. The upkeep of machinery, water supply and light cost L.E. 4,169 in the year 1923. A bakery is run by hand labour.

The arrangement of the Hospital is of the villa-colony type. Its cost of construction up to March 31, 1923, was L.E. 234,643, *i.e.*, about L.E. 391 per bed.

A farm of 51 acres has been cultivated at Khanka, and vegetables, milk and forage are raised for local use. A considerable number of the patients work on the farm. The institution is kept scrupulously



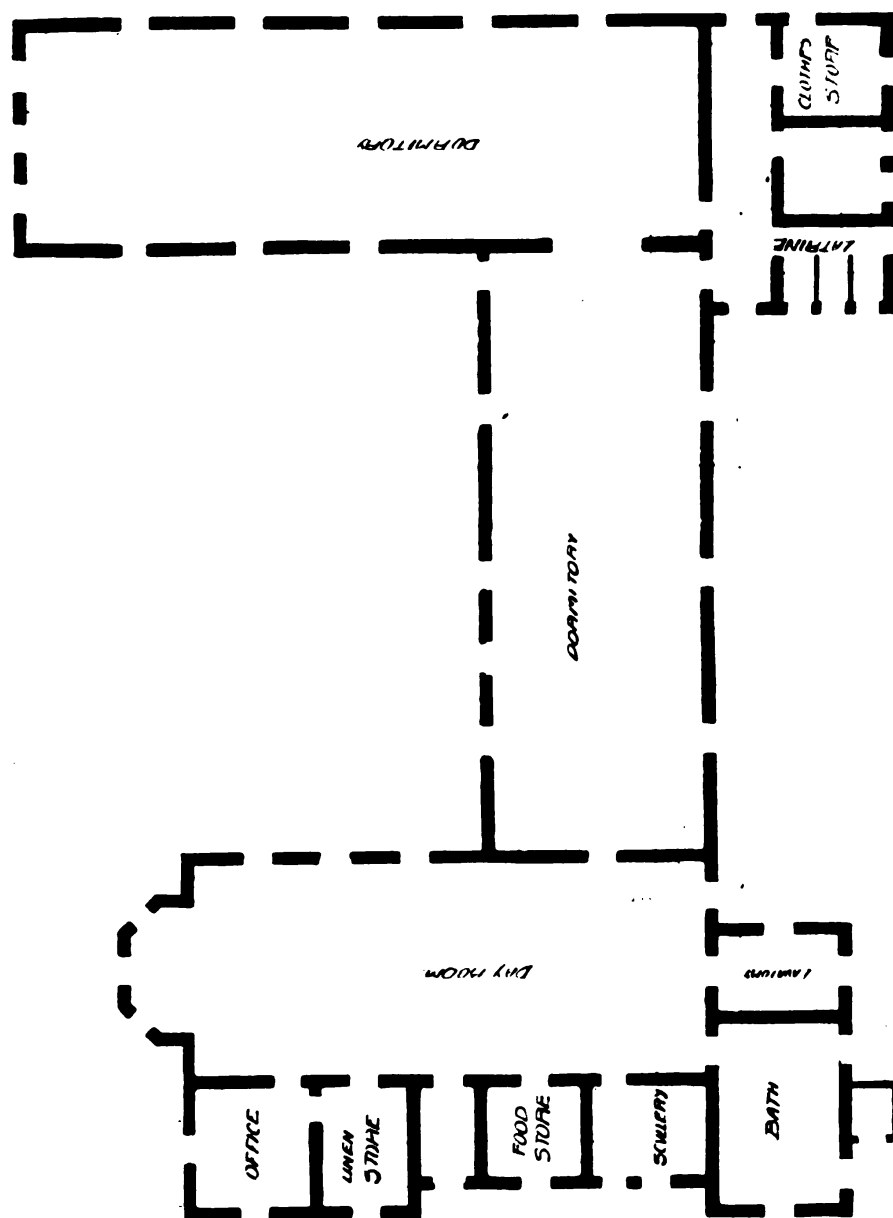
clean and airy, and has developed into a grateful oasis on the white sand of the desert.

After the opening of Khanka Hospital the Government decided to pump the whole of the sewage of Cairo to a new sewage farm at Khanka, not far from the Hospital. I protested against this decision, but in vain. A sewage depot is now adjacent to the new asylum, as was the case at Abbâsiya. The nuisance caused by the foul smell

from the Khanka sewage farm when certain winds prevail is not small; and the sewage infiltrating the adjacent low-lying land and producing stagnant pools is blamed for the prevalence of mosquitoes in the Hospital.

KHANKA HOSPITAL FOR THE INSANE.

Section for quiet cases.



The admissions to each hospital, excluding transfers, were in 1922 :

Abbâsiya, 189 males, 309 females	Total, 498	} Total, 1,073.
Khanka, 575 males	Total, 575	

The Abbâsiya male admission-rate has to be kept lower on account

of the prolonged residence of most of the male cases there who are criminals.

Both institutions are fitted with modern locks arranged in appropriate suites, heating apparatus for single rooms, hot and cold baths, photographic rooms, and all the usual office forms and records. There is at the Central Office an index to the dossiers and case-papers of the 21,000 patients treated in the last twenty-eight years, so that each readmission can be identified.

It is to be remarked that, owing to the free cross-ventilation everywhere provided, there is in these institutions none of the stuffy smell one has noticed in some English mental hospitals.

ANNUAL COST OF MAINTENANCE FOR 1922.

	Abbâsiya. L.E. Mill.	Khanka. L.E. Mill.
Food	23,245'088	12,838'195
Tobacco	843'280	1,282'000
Water	2,170'802	—
Coal, wood, and mazout, etc.	3,797'157	2,380'363
Electric lighting supplied by Heliopolis Co.	360'997	—
Candles and matches	15'040	—
Soap, soda, and laundry material	669'224	199'920
Household necessities	838'034	477'187
Clothing and its repairs	7,268'004	1,614'950
Furniture	89'000	32'730
Milk purchased from contractor	4,404'553	} 2,039'662
Sterilized milk	32'702	
Drugs and instruments	590'381	389'746
Mules' forage and shoeing	117'025	314'438
Printing, stationery and books estimate	125'000	74'463
Material (for weaving and for making mats and baskets)	88'947	—
Telephone rent and repair	64'300	74'401
Photographic material	11'000	8'100
Burial expenses	9'600	5'675
Salaries and wages, including war bonus, etc.	25,492'505	15,797'909
Petty cash disbursements	106'386	228'950
Small repairs, carpenters' material, etc.	501'980	109'236
Tinning and repairing copper utensils	35'848	—
Fuel-oil, oil, grease, etc., for machinery	—	1,153'786
Transport	—	230'323
Total	L.E. 70,876'853	39,252'034

In 1922 the total annual cost of the Lunacy Division and its two Hospitals was L.E. 116,526, including the expense of the Lunacy Division Office (L.E. 4,575), and L.E. 1,822, the expense of Khanka Farm.

On deducting the two latter items the cost of the two hospitals is found to be L.E. 110,129.

The average number of patients daily resident having been 2,474, the gross cost per inmate was L.E. 44'575 millièmes per annum.

On deducting the receipts (*viz.*, at Abbâsiya, L.E. 12,045, received in payment for maintenance, etc., and at Khanka, L.E. 2,017, for

receipts for farm produce, etc.), the net cost is found to have been L.E. 96,055, *i.e.*, L.E. 38·830 millièmes per inmate per annum (*i.e.*, 747 millièmes, or 15s. per week). [Compare 27s. per week in 1922 in English county and borough mental hospitals.]

Thus, Egypt, containing thirteen million inhabitants, spent L.E. 116,526 on its certified insane in 1922, while England and Wales, with thirty-eight million inhabitants, spent nearly seven million pounds on maintenance, and three-quarters of a million in buildings and land in the same year.

Cost of maintenance.—The table on p. 406 shows the cost of maintenance in 1922.

STAFF.

The staff of the Lunacy Division and its two Hospitals consists of 698 individuals, including 17 medical men, 2 pharmacists, 1 steward, 3 head nurses, 7 Egyptian trained nurses, 20 assistant nurses, 5 head attendants, 4 storekeepers, 3 electricians, 16 clerks, 42 male charge attendants, 280 male attendants, and 175 female attendants, the rest of the staff being employees of various kinds—artisans, drivers, servants, etc.

The educated employees with certificates are in the "Cadre," and are pensionable. The attendants and servants are *hors cadre*, and only get a small indemnity if invalided. An intermediate class are engaged on temporary contracts. Cadre and temporary employees may have six weeks' leave annually in Egypt, or two months out of Egypt. *Hors cadre* employees may have one month's holiday annually.

The long annual leave of absence of the superior employees tends to upset the work a good deal. As, owing to the war, most British senior officials have an accumulation of missed leave in hand, they can take 3½ months' leave annually, and they need it. Without a long annual leave, one becomes in this enervating climate so stale and worn-out with attempting to make the East behave like the West, that an annual exodus should be insisted upon by the Government, even against the official's wishes. But all the same, the long absences impair the work.

The hours worked in most Government offices (nominally 8 a.m. to 1.30 p.m.) are, in the winter at least, too short. In private businesses and banks afternoon hours are worked, and in the hospitals for the insane work has to go on all day. But officials in the hospital service feel aggrieved at being worked much harder than in other Government Departments, although a small addition is made to their salaries in return for the longer hours.

The hours of the Hospital clerical staff have until recently been

unduly long. Until the year 1900 the clerks worked from 7 a.m. to 7 p.m., with two hours' rest, seven days a week, without any annual leave. Gradually as the staff extended, the hours have been reduced and holidays allowed, until now they get annual holidays, and weekly a whole holiday and two afternoons.

The recent Commission to reform the Government Cadre proposed three hours' work in the afternoon on three days a week during the six cooler months—not a large demand in view of the long hours worked in Government Departments in other hot countries.

A number of the Hospital staff, *viz.*, the Directors, sub-directors, five of the assistant medical officers, the stewards, the English nurses, the electricians, and at Khanka several other officials and twenty-nine subordinate employees, have residences on the estate. All employees receive a ration varying according to their positions, and to the time they spend at the Hospital; but in reckoning pensions, the value of these emoluments is not taken into consideration as in England. However, in future the better-paid officials will pay for rations and house rent out of their salaries.

Pensions are calculated at the rate of one sixtieth of the salary for every year served after at least fifteen years' service, on reaching the age of 55 years, with a forced retirement at 60, and a maximum pension of L.E. 960. This is a much lower scale than that authorized by the English Asylum Superannuation Act, which gives one-fiftieth of the salary for each year served, all emoluments being taken into account, with a possibility of an addition of one-fifth of the salary as extra pension for special services. I requested a similar scale for Egypt, but without success. Usually Government employees do not work on Fridays, and have seventeen other general holidays annually; and in the hospitals for the insane one-seventh of the employees, doctors, clerks, attendants, and servants are absent every day on weekly leave, but the general holidays could not be observed in these hospitals without embarrassing the work. There is one exception to the weekly holiday—the Director, who owing to the necessity of continuous supervision, takes four afternoons only off duty per week. He or the Sub-Director is always present in the afternoons and nights.

Until 1902 I was the only British official. There are now six British officials, including two lady head attendants.

The Egyptian trained nurses act as charge nurses of the Hareem sections; they are really certificated midwives, and on appointment have no knowledge of mental nursing. They are not nearly as efficient as the uncertificated male attendants, who receive only half their pay. As these nurses are pensionable employees, it is difficult to get rid of unsuitable individuals; *e.g.*, some years ago one was

seen by a medical officer to ill-treat a patient, and her removal from the service of the insane, where one of her chief duties was to prevent her subordinates from ill-using patients, was clearly indicated. However, I could only fine her and suspend her from duty, and she continued to draw her pay from the Hospital for some months, while she worked in another administration. Meanwhile there were of course no funds to pay for a successor in her post at Abbâsiya.

The assistant medical officers are usually graduates of the Cairo Medical School, which maintains a high standard of teaching; a few are qualified in England. The large number of assistant medical officers (12) for the number of patients, 2,491, *i.e.*, about one medical officer per 200 patients, is chiefly due to the amount of leave given in Egypt. Thus, at Abbâsiya, an extra medical officer is required to relieve his *confrères* on their weekly holidays; and another is required to act as *locum-tenens* for those on annual and sick leaves, which never cease, leaving ten available for daily duty at the two Hospitals; each of them deals with about 250 patients on an average. The medical officers are on duty in the wards from 8.30 a.m. to 1.30 p.m. daily, and the seniors remain on the premises ready for admissions and emergencies on two afternoons a week, while the juniors remain on three afternoons a week. All medical officers also do night rounds on at least three nights per week, and then sleep on the premises and attend to any night calls, which are rare.

The senior assistant medical officers can be absent one whole day, four afternoons, and four nights per week. Juniors can be absent one whole day, three afternoons, and three nights per week. These hours of duty are much shorter than in the old days in Egypt, when only two afternoons a week were allowed off duty, with no weekly holiday.

The actual amount of work at Abbâsiya has diminished of late years by the extension of the Khanka Hospital and from other causes, whereby the admissions have fallen 60 *per cent.*—from 1,345 in 1916 to 517 in 1922. This reduction has diminished the work of the admission-room, and has greatly reduced the number of recent and acute cases in residence—the class that gives the most work. The great increase in the number of single rooms has also caused a decrease in the night work.

Assistant medical officers commence at a pensionable pay of L.E. 192 a year, *i.e.*, £48 more than a junior medical officer in the Public Health Department; they also have an allowance of L.E. 48 a year (unpensionable), and rations, costing from L.E. 48 to L.E. 111; this extra pay is to compensate for their longer hours, which interfere with their opportunities to carry on private practice outside. The hospital work being enough to engage all their energies, private practice should

not be allowed here any more than in England. Medical officers also receive a war (H.C.L.) bonus at present. Recently a new scale of salaries has been introduced. The student and professional classes in Egypt have been in the van of the movement, so that want of discipline was to be expected in the Government service. The superior staff of Abbâsiya took part in the general strike of 1919, but a supply of medical and clerical assistance was allowed to prevent the Hospital being closed up. Since then all sorts of petitions for improved pay, shorter hours, etc., have been made, some indeed with a certain foundation.

(¹) In 1920 and 1921 the number of admissions to Khanka Hospital was also over 100 *per cent.* of the number of beds on its establishment.—(²) As explained at the foot of the table, the Austrian rates are shown far too high, owing to the low figures of census taken during the war, and are therefore disregarded.—(³) Including also convicts in the period 1906–1911.—(⁴) As, however, in Cairo only the most unmanageable of the insane are interned, while in England mild cases are also sent to hospital for treatment, it is probable that the real insanity-rate, inclusive of mild cases, is as high in Cairo as in England.—(⁵) In U.S.A., 2·2 per thousand, although the annual certification-rate there is actually higher than in England.—(⁶) One Diesel engine of 66 h.p., one Diesel 33 h.p., and one Gardener 25 h.p.

(*To be concluded.*)

Clinical Notes and Cases.

Pellagra: A Report of Four Cases, with Histological Findings in One Case. By P. K. McCOWAN, M.D.Edin., M.R.C.P.Lond., D.P.M., A.M.O., Cane Hill Mental Hospital. From the Pathological Laboratory of the L.C.C. Mental Hospitals, Maudsley Hospital, Denmark Hill.

DURING the past two years I have had under observation four cases, which in their clinical manifestations and course bear such striking resemblances to cases reported in medical literature as pellagra, that I have felt warranted in diagnosing these cases as such. In this report I do not wish to advance any personal views as to the nature, ætiology, pathology or treatment of this disease, but to direct attention to the possibility that it is more prevalent in our mental hospitals than is generally supposed.

The first British case of pellagra to be published was in 1866, when Howden reported a case from Montrose in Scotland. After that nothing was heard on the subject till 1909, when Brown and Low reported a case from Edinburgh. Since then various cases have been published at different times, the great majority of these having occurred in mental hospitals. Sambon investigated many

of these cases, and considers that they support his protozoal theory of the ætiology of pellagra. Very few authorities, however, now consider this theory feasible, and regard it as of historical interest only. The majority of continental and many American writers still consider that bad maize is the cause of pellagra, and refuse to allow that any of the many cases described where maize as an ætiological factor can be definitely excluded are really pellagra. They term them pseudo-pellagra, parapellagra, pellagra of the insane, etc. A theory widely held in America is that the condition is a vitamine deficiency, and pellagra certainly has many similarities to other deficiency diseases, especially beri-beri.

One of the most painstaking and thorough investigations into the subject was that of the Thompson McFadden Pellagra Commission in America, and in its final report in 1917 it states, "Pellagra is an infectious disease which spreads slowly, attacking only a small proportion of the population residing in the immediate vicinity, and further that its spread is especially favoured by insanitary methods for the disposal of human wastes. Susceptibility is an important factor." In the cases in this series there is nothing to suggest that the condition is infectious. All the cases occurred in different parts of the building, and at no time had any communication with one another.

It is quite possible that in many diseases what is regarded as a disease entity is really only a syndrome, which may occur in a variety of conditions of different ætiology, and until this has become appreciated, there will be a distinct tendency to forcibly fit in new facts into the preconceived scheme, and to discredit those facts which cannot be so fitted in. This is very noticeable as regards pellagra in the writings of American zeists—that is, in those who maintain the maize theory of pellagra. Thus one of the greatest American authorities, Harris, in his endeavour to account for American cases where maize has not been eaten, has put forward the theory that pellagra is an hereditary disease, and that in the cases where maize has not been eaten by the individual attacked, it must have been by the parents or grandparents. There is little doubt that but for the Italian theory, maize would not have been given the prominent place it holds in American literature on the subject.

A factor common to all my four cases is that prior to the onset of their pellagra they were improperly nourished owing to their refusal to take sufficient food. In one of the cases it is possible that the condition was present before admission, but she did not show the characteristic erythema till three months after admission. The cause of pellagra being unknown, the incubation period is also unknown.

It was noticed that many of the Turkish prisoners in an Egyptian hospital who developed pellagra had previously suffered from dysentery, and this has often been found in the previous history of American cases. This might suggest a correlation between asylum dysentery and pellagra of the insane—both conditions practically unknown in Britain outside mental hospitals. None of the present series, however, had a history of dysentery prior to their pellagra.

It is well known that sulphonal can cause skin rashes and gastrointestinal symptoms, but none of these cases had any sulphonal except one, and she only had it for one week, and that after her skin lesions had appeared.

Pellagra attacks persons of all ages and both sexes. A characteristic feature is that the symptoms make their appearance in the spring or early summer, disappear during the winter, to reappear during the following spring. This recurrence may take place for an indefinite number of years, whereas in the acute type a fatal termination may be reached in a few months. The disease is usually described as occurring in three stages. The first stage, or stage of pellagrous neurasthenia, which usually lasts days to weeks, was well marked in all four cases of this series. The symptoms during this stage include the following: hypochondria, digestive troubles, constipation, sore mouth, loss of weight, vertigo, sense of heat in hands and feet. The second stage, or stage of classical pellagra, is characterized by four sets of symptoms, *viz.*, cutaneous, alimentary, nervous, and mental. On the back of the hands suddenly appears a bright red erythema, like sunburn, which later becomes deeply pigmented with hyperkeratosis and bran-like desquamation. Vesicles or bullæ may develop in the affected parts, and these sometimes go on to ulcer formation.

The dermatitis may be abortive and entirely disappear in a week, but usually it shows some amelioration in ten to twelve days, with return to normal in six to eight weeks, but wrinkling may remain, and this, with pigmentation and thickening of skin, may be permanent. It is bilaterally symmetrical, with a well-marked line of demarcation, and affects those parts usually exposed to light and other sources of irritation. Its most usual sites are the back of the hands, the face and the neck, but it is quite common on the wrists and lower parts of the forearm, the tip of the elbow, and the upper part of the chest. Atypical sites are apt to be affected in severe cases. It should be noted that the erythema may appear while the patient is confined to bed, and that it may occur several times in one season. Acute glossitis and stomatitis are frequent in the earlier stages of the attack, the irritated, swollen and very red tongue, often ulcerated, being very striking. The condition is

very acute at its beginning, but its subsequent course is usually chronic, and lasts well into convalescence. Excessive salivation is often met with, and other alimentary symptoms frequently present are loss of appetite, flatulence, vomiting and diarrhoea. The stools are always alkaline, usually frothy, and have a very peculiar foul odour. The most common nervous symptoms are tenderness and pain at some points over the back; tinnitus; vertigo; tremors and choreiform movements; muscular asthenia with slow uncertain gait; short steps, bent knees, wide base and dragging of one or both feet; spasticity of the legs, with increased knee-jerks, later followed by loss of this reflex; an extensor plantar response can sometimes be elicited. There seems little doubt that pellagrous insanity has no special characteristics of its own, but that pellagra may be the exciting cause of most of the recognized forms of insanity. The present series agrees with the majority of cases in exhibiting a more or less profound depression at the height of the disease. A resultant dementia is common. It is important to distinguish between insanity due to pellagra, and pellagra in an insane patient. Except in "typhoid pellagra," there is usually little or no rise of temperature, but the pulse tends to show a distinct increase in rate. Leucorrhœa is common in female patients. A mild anæmia is often present, but there is no characteristic blood picture. The other systems of the body do not present anything of note. The third stage is the second become chronic in one or other characteristic and presents various types.

Owing to the usual criticism of the zeists that the recorded cases of pellagra among non-maize-eating people have always been too scantily described for certain diagnosis, it has been considered advisable in this paper to report the four cases as fully as possible. In two of the fatal cases the macroscopic *post-mortem* findings only are recorded; in the third the results of the histological examination of the various viscera are also given.

I take this opportunity of thanking the Medical Superintendent of Cane Hill Mental Hospital, Dr. S. C. Elgee, for permission to publish these cases.

CASE 1.—E. A—. Lived in Paddington before her certification in 1910, and after three years' residence at Croydon Mental Hospital she was transferred to Cane Hill Mental Hospital on February 25, 1913, being then æt. 53. She was single, and had been a cook in civil life. There is nothing in her history prior to this which shows any bearing on the disease from which she died, and her family history contains nothing of interest.

On admission she was fat, weighing 11 st., and her physical state is described as fair. No lesions were discovered apart from a mitral systolic bruit.

Prior to her certification she had attempted suicide by hanging and by poison. At this time she was in a state of acute melancholia. This never quite cleared up, and she became a chronic melancholic with mild dementia, quite lacking in self-confidence, and with no desire for discharge. She was a trusted patient, more or

less on parole, and continued in this state with occasional exacerbations of her melancholia up to the beginning of 1923. In February, 1923, she became troublesome with her food, with the delusion that her bowels wouldn't act, and she blamed some liniment which she said she had swallowed some years previously. She complained of headaches and general malaise, and chiefly owing to insufficient nourishment her weight, which had been 10 st. 11 lb. in December, fell to 8 st. 7 lb. by March. In April she complained bitterly of burning pains in her stomach, had difficulty in swallowing, and much retching with occasional vomiting. On June 20 an erythema of her hands and face was noticed. She had been in the sun the previous day, and the condition was considered to be connected with this in some way. The erythema was a bright red, and, especially on the hands, looked like a severe sunburn. It was symmetrical with a definite line of demarcation, and on the hands was confined to the extensor aspects, extending from the terminal interphalangeal joints to just above the wrists. On the face it affected the bridge of the nose, spreading outwards to the malar region and downwards to the chin. The forehead was affected later. Her skin, which was normally of a rather dark colour, appeared to have become somewhat darker all over her body. The erythema became more livid in colour, and passed into a state of weeping dermatitis with much pigmentation and keratosis. Many bullæ formed, and when these dried up they left black scabs, which later came off leaving clean pink skin underneath, the absence of ulceration in this being very striking. The patient was much worried by her skin condition, but at no time did she complain of any pain or itching in connection with it, though in the early days of it she stated that the sun made it burn, and after this she was confined to the ward. Her lips became much swollen and cracked, and the mucous membrane of her nose was much inflamed and ulcerated, with abundant scab-formation, which inconvenienced the patient very considerably. By the end of June she was noticeably much feebler, her weight having fallen to 7 st. 7 lb., and she walked slightly bent with short, shuffling steps. At this time her knee-jerks were slightly exaggerated. She spent much of her time in bed, and on June 29 she was definitely confined to bed, where she remained till the end. From this time on she had a slight evening rise of temperature. Her dermatitis was now very sore and weeping, and diarrhœa, which had set in previously, slight at first, had now become severe, her numerous watery stools being frothy with a peculiar foul odour, which was present in all four cases of this series. This odour is extremely offensive, and quite distinct from that of the dysenteric stool. There was some blood and mucus present, and the patient complained of tenesmus and colicky pains. Bacteriological examination of her fæces revealed no pathogenic organisms. During the first week of July excoriation of the internal surfaces of her thighs and buttocks around anus started, and these later became sodden and raw. At this time her mouth condition was very distressing, her tongue was very red and swollen with deep fissures, her gums were inflamed, the buccal mucous membrane red, tender, and swollen, with a few aphthous ulcers on the cheeks. This occasioned much difficulty in mastication and swallowing. She had no excessive salivation.

During the second week in July a distinct improvement set in in some of her symptoms. Her dermatitis gradually dried up, leaving marked chocolate-brown pigmentation with hyperkeratosis and desquamation of back of hands and wrists and of chin. Her thighs and buttocks also showed considerable improvement. Her stomatitis also improved greatly towards the end, although her diarrhœa continued unabated. These changes were not accompanied by any change in her depression, which was now profound.

After she became bedridden her knee-jerks could not be elicited, and she complained of pain in her back with tenderness over her lower spine. Her plantar reflexes were flexor, and there was no patellar or ankle clonus.

Throughout her illness nothing abnormal was found in her lungs, nor did repeated examination reveal any of the common abnormal constituents in her urine.

She sank and died on July 20.

Autopsy.—31 hours p.m.

Emaciated. Pigmentation and keratosis of chin, back of hands and wrists with peeling off of skin. Signs of recent ulceration of buttocks around anus.

Skull and meninges normal. Cerebrum 1,150 grm.; cerebellum, pons and medulla 150 grm.; no gross changes.

Pleuræ, no adhesions or fluid. Right lung 260 grm., left 240 grm.; *nil* abnormal. Heart 250 grm. Pericardium *nil*. Slight thickening of mitral valve. Myocardium rather thin. Aorta some atheroma.

Liver 1,430 grm., "nutmeg." Spleen 650 grm., *nil* abnormal. Kidneys—right 110 grm., left 150 grm.; capsules stripped well, and *nil* abnormal detected apart from difference in size of two kidneys. Thyroid, pancreas, adrenals, *nil* abnormal. Intestines full of liquid fæces; much congestion and ulceration in small intestine; large intestine much congested with row of ulcers throughout its whole length, extending into rectum.

CASE 2.—M. B.—. Married, two children; lived in Chelsea, and worked as a leather and cardboard box maker and at charing. She was of steady habits and a teetotaler, and is reported as being of a cheerful temperament till her daughter's death in December, 1914. She has a brother in Sutton Mental Hospital. Her history states that she became strange in her manner after the death of her child, and that she became increasingly so till she had to be certified in May, 1919, and sent to Hanwell Mental Hospital. She was discharged after two months, but her condition was only relieved, and she continued deluded and much troubled with insomnia. She was admitted to Cane Hill Mental Hospital on June 14, 1920, and was then *æt.* 50. She was hallucinated, with paranoid delusions of persecution. There was some dementia evident. She was troublesome with her food, and had to be hand-fed. Her mental state showed little change up to the onset of her fatal illness, and it was always more or less difficult to get her to take sufficient nourishment.

Her physical condition on admission was only moderate, but there was no evidence of any definite organic disease. Her weight was 7 st. 11 lb. Her knee-jerks were slightly exaggerated, her superficial reflexes normal. Sensation appeared normal. Her vision was defective, especially in right eye; pupils were of moderate size and reacted normally.

On March 29, 1922, she had a slight sore throat with temperature 99° F. A swab gave a negative bacteriological result, and she seemed to have quite recovered when suddenly on April 6 her temperature rose to 103° F., and she was found to have erysipelas of right side of face. This spread to the opposite side, but by April 17 she appeared convalescent, and was allowed up. Owing to her refusal of food, however, her convalescence was not satisfactory. On May 17 an erythema was noticed on the back of her hands and wrists and on the back of her neck. This was bright red like sunburn, and was symmetrical. She appeared ill, and was seen to be walking with short feeble steps, with uncertain gait, and an occasional limp. Her knee-jerks were slightly exaggerated, but she had no clonus, and her plantar reflexes were flexor. From this time on she was confined to bed. Her skin condition became rapidly worse, bullæ forming on her hands and breaking, with resulting foul septic areas. The rest of affected skin was much pigmented and thickened with much shedding of epidermis. The dermatitis of neck remained dry, but here also there was much pigmentation and hyperkeratosis with bran-like desquamation. The dermatitis on the hands spread to 3 in. above the wrist, and showed a well-marked line of demarcation. It did not spread to the front of the wrist, and, as in all these cases, it was absent on the palm of the hand. A similar condition appeared over olecranon process and in the bend of the elbow, also over both scapulæ. In the bend of the elbow the dermatitis was wet, but it remained dry in the other areas. The rest of her body was clear. From the beginning of June her dermatitis began to improve, and by June 12 it had become quite dry, but desquamation continued till her death on June 19. During the last week of her illness she had marked vertigo, and used often to shout out, "I am falling, I am falling," and when questioned said that everything was going "round and round."

She lost weight rapidly during her illness and was acutely depressed, and complained of severe headaches. Her aversion to food was increased by the condition of her mouth. She developed a severe stomatitis with dry, cracked tongue which was raw and red, and towards the end sordes was present on her swollen lips and cheeks. The gums were swollen and spongy and bled easily, over her lower incisors being especially inflamed. There was no excessive salivation.

Before her illness she was constipated, but with its onset she developed looseness of the bowels. This was never severe, but her stools had the same foul odour

present in the other cases of this series. They contained no blood or mucus. For three days before death she had much vomiting.

On July 1 she was noticed to have a foul vaginal discharge which was very profuse, but which gradually improved under vaginal douches.

She had an evening rise of temperature to about 100° F. from May 21 to 24, but after this her temperature was normal or subnormal with the exception of two occasions when it rose slightly in the evening. Her pulse on the other hand was fast all through her illness, usually above 100, and towards the end it was in the neighbourhood of 120 for a few days. It was of fair strength and volume at the beginning, but became somewhat thready towards the close. Towards the end of her illness her knee-jerks and plantar reflexes could not be obtained. Nothing abnormal was detected in her lungs. Her urine contained no sugar or albumen.

Autopsy.—14 hours p.m.

Emaciated. Dermatitis both hands and wrists. Some thickening of dura, otherwise skull and meninges normal. Cerebrum 1,080 grm.; cerebellum, pons and medulla 170 grm.; no gross changes.

Old fibrous adhesions of both pleuræ; bronchial glands enlarged. Right lung 480 grm., old fibrosis; left lung 560 grm., marked bronchitis.

Pericardium *nil*. Sclerosis of mitral valves. Myocardium thickened, ventricles dilated. Aorta healthy.

Liver 1,290 grm., adherent to diaphragm. Spleen 110 grm., *nil* abnormal. Kidneys—right 150 grm., left 165 grm., large and red with evidence of chronic nephritis. Suprarenal medullæ wasted. Pancreas *nil*. Intestines—no gross changes.

CASE 3.—F. B.—. Married, one child; munition worker during war, then waitress; lived in Camberwell. On admission to Cane Hill Mental Hospital on March 14, 1919, she was æt. 32.

There is very little record of her previous or family history. She has a brother and sister alive; a brother died of typhoid fever some years ago.

On admission there was nothing of interest in her physical state. Her physique and general health are noted as fairly good, and her weight was 8 st. 10 lb. Her reflexes were normal.

On admission she was very confused and unable to give any account of herself. She was aurally and visually hallucinated and most irrational. She was very faulty in her habits and required every attention. She developed into a wet and dirty, hallucinated, destructive, impulsive schizophrenic, and remained in this condition up to the time of her attack of pellagra. Her weight, which had never varied much, was 9 st. in January, 1922.

On March 12, 1922, she was noticed to have a symmetrical weeping erythema on the back of her hands and wrists, with a well-marked line of demarcation. Two days later a similar condition developed on the inner aspects of her thighs. Sandwith states that in this position pressure is clearly an exciting cause of the inflammatory eruption, but in this case her extremely faulty habits were probably contributory. The dermatitis of the hands, which extended to 3 in. above the wrists, soon showed signs of improvement, and passed into a state of dry erythema with pigmentation, hyperkeratosis and bran-like scaling. Her thighs became raw and septic, the condition being aggravated by her faulty habits, her resistance to any attention and the impossibility of keeping any dressings in position. In spite of this however, healing set in, and with surprising rapidity the foul septic areas had given place to clean pink skin by March 25. During this fortnight's illness her morning temperature was never above normal, but on six occasions her evening temperature was up from 98·8° to 100·6° F. Her pulse on the other hand was persistently high, often over 100 while her temperature was normal, and usually over 90. Her respiration varied from 18 to 24.

On March 25 she became relaxed, and the sulphonal which she had been put on a week previously was stopped. This was the only time this patient was on sulphonal, and, as already stated, none of the other cases had this drug at any time. The looseness of her bowels only lasted two days, and from this time on she continued to convalesce fairly satisfactorily. The skin condition on the back of her hands, however, did not clear up, and on May 11 there was seen to be an exacerbation of it. It was now deeply pigmented, of a dark chocolate-like hue, and the exacerbation was considered to be due to the sun. It remained dry, however,

and was very scaly. A similar condition now started on her face, spreading out from the bridge of her nose under both eyes in a butterfly-like fashion. This settled down in a few days and things remained more or less stationary till August 18, when the whole condition again lit up and she rapidly became seriously ill. She had some vomiting after food, with which she had been difficult for some time. The dermatitis of her hands now became wet, and spread further up her forearms on the extensor aspects. The skin around her anus became excoriated, with shedding of the epithelium. She had a raw, red, swollen tongue, inflamed ulcerated gums, dry cracked lips, and red inflamed buccal mucous membrane. As usual with her, she paid no heed to the calls of nature, and the stench from her was most foul, and the peculiar disgusting odour present in all four cases was most marked in her. She had looseness of the bowels scarcely amounting to diarrhoea, but at no time has she presented any dysenteric symptoms. Her temperature and pulse continued to show the same characteristics as during her former attack. Her dermatitis gradually improved, and by the end of the first week in September it was quite dry and all the denuded skin areas were healed, but the skin of her hands and around anus was very leathery and pigmented. Improvement was also noted in her stomatitis. She had become very emaciated, however, and showed marked muscular asthenia, with loss of knee-jerks, and choreiform twitchings of arms and shoulders.

During October she complained much of pains in her knees, but owing to her confused mentality no sense could be got out of her, and it was impossible to determine how much of her shouting was due to psychic causes. Throughout the acute part of her illness she had continued in her usual state of catatonia, inaccessible, incoherent and resistive to all attention. During November an improvement was noticed in her mental condition. She became much quieter, ceased to be resistive, talked coherently, and for the first time took a satisfactory amount of nourishment, and that without persuasion. Owing to her habit of lying with her feet drawn up with her thighs flexed on her abdomen considerable contracture had set in, and massage and movements had now to be instituted to overcome this disability. Her blood, which had been examined in August was again examined, with the following result: Reds, 4,100,000; whites, 9,800; consisting of lymphocytes, 35 *per cent.* polymorphonuclears 65 *per cent.*, hæmoglobin 60 *per cent.*, colour index .7, *i. e.*, a mild secondary anæmia of chlorotic type with a slight lymphocytosis. Her blood-pressure at this date was 120. She continued to improve, and by the end of November she was able to be up in the afternoons, though it was a month later before her contractures had improved sufficiently to enable her to walk. The improvement in her mental condition was equally striking, and she was a different being from what she had been at any time since admission. Although she was distinctly childish she was now able to look after her own needs, and gave no active trouble in the ward. This improved state of affairs continued all through the winter till the spring of 1923, but about the middle of April she gradually became unsettled with occasional noisy outbursts, and on April 24 she was violent and destructive. Since then her mental state has shown no improvement, and she is again the same hallucinated, impulsive catatonic as of yore. During May her hands and wrists, which had continued pigmented and leathery, exhibited an erythema, which, however, remained dry, and during the summer, though she was rarely out of the ward, and then always sat in the shade, this erythema continued to recur. In June she had repeated attacks of slight diarrhoea and became rather feeble, but did not require bed treatment. Her stomatitis also recurred with its red raw tongue and inflamed gums, but it was much less severe than during the previous summer, and the mucous membrane of the cheeks did not seem to be involved. During the last week in June she had a mild conjunctivitis which soon cleared up. The twitchings of her arms and shoulders were now more marked, and she had a somewhat spastic gait with distinct difficulty in getting up from the sitting position, though there was now no sign of her former contractures. Her knee-jerks were again present, slightly exaggerated, but with no patellar or ankle clonus, and her plantar reflexes were flexor. These nervous signs have remained unchanged.

There is now (December, 1923) some thinning of the pigmented skin of the back of her hands and wrists, and this pigmentation is now much lighter. The pigmentation around her anus remains. The sebaceous glands of her *alæ nasi* are prominent. Her tongue is somewhat flabby and anæmic looking, but not unduly

wasted, and its longitudinal fissures are prominent. Inflammation of the gums is present, especially of the lower jaw, but there is no lividity of the buccal mucous membrane.

CASE 4.—A. W.—. Wife of leather-finisher. Married 32 years; had one miscarriage, one stillbirth, and one son still living. She was an artificial flower-maker and housewife, of steady habits and moderate with alcohol, living in Bermondsey before admission to Cane Hill Mental Hospital on March 23, 1923, æt. 54.

Nil of importance in family history. She was in South London Hospital for Women in December, 1922, for prolapsus uteri. Her husband states that after leaving there she had a nervous breakdown, and a delusion that her throat was "choked up," and she refused to eat anything on account of pains in her abdomen and throat. Sleepless for a week before admission. She was three years past menopause.

On admission she was emaciated and in poor health; her weight was 6 st. 7 lb. Radial arteries slightly atheromatous. Urine 1,025, acid, no sugar or albumen. *Nil* detected in heart or lungs. No overt abdominal lesion; tongue clean, oral sepsis present. Knee-jerks \pm . Peripheral hyperalgesia. Sight $\frac{7}{8}$ both eyes. Pupils moderate, equal, regular and react normally. Thyroid not enlarged. Serum Wassermann negative.

On admission she was very depressed with somato-psychic delusions. Thus she said that her bowels hadn't acted since the previous Christmas, that she couldn't pass urine, and that she had no breath. She had been hallucinated prior to admission, but there was now no definite evidence of this. She refused food and required to be hand-fed. Sleep bad.

On April 10 she had four teeth extracted by the dentist. On April 12 she was noticed to have diarrhœa, but there was no blood or mucus in her fæces, and she had no fever. Rectal examination showed presence of hard fæcal masses in the rectum and treatment for this cleared up her diarrhœa. By the end of April she was noted as being less depressed and as taking her food better, though still lacking in appetite. She was well enough to be allowed up in the afternoons from April 30, and a week later she was allowed up all day. Her weight had fallen to 5 st. 13 lb. She was still very depressed, but now smiled occasionally. She had a feeble gait and walked with short shuffling steps. Her knee-jerks were slightly exaggerated, and her other reflexes normal. Towards the end of June an erythema was noticed on the back of her hands and wrists. This was symmetrical; it was very red at first like sun-burn, and later became very scaly, and this hyperkeratosis continued to the end. Between the thumb and forefinger of each hand the dermatitis was "wet," but otherwise remained dry. A similar condition of hyperkeratosis and scaling appeared on her face, attacking her upper lip and chin. This was dry except at the corners of her mouth, and the wet condition here may have been due to her excessive salivation. The rest of her body was clear. She developed a severe stomatitis, with bright red tongue which was not swollen or fissured. Extensive ulceration of gums. The mucous membrane of her cheeks appeared normal.

She rapidly became more emaciated, and was confined to bed from July 11 onwards. By this time her weight had fallen to 4 st. 4 lb. It was extremely difficult to get her to take nourishment. Diarrhœa now set in with abundant blood and mucus in her liquid fæces. These were frothy, and had the peculiar foul odour described in the other cases in this series. She complained of abdominal pains. By July 18 she was scarcely able to swallow, and her stools now consisted chiefly of blood and she had lost control over her sphincters. She continued to go downhill, although her skin condition showed some improvement, and ultimately died on July 25.

Autopsy.—10 hours p.m.

Emaciated. Excoriation left buttock. Excoriation lips and around mouth. Blistering and dermatitis of hands.

Skull symmetrical and of average density. Dura slightly thickened, pia normal. Slight excess of subdural and subarachnoid fluids. Cerebral vessels somewhat thickened. Cerebrum 980 grm., softened and œdematous; cortex normal, white matter and basal ganglia soft with vessels prominent. Slight excess of fluid in

lateral ventricle; no "frosting." Fourth ventricle normal. Cerebellum, pons and medulla 100 gm. *Nil* abnormal. Pituitary small.

Thyroid *nil*. Ribs thin, no fractures. Pleuræ—right normal, left adherent at apex. Bronchial glands not enlarged. Lungs—right 210 gm., small and frothy; left 180 gm., small, frothy, with patch of purulent consolidation at back of lower lobe.

Heart 190 gm. Pericardium healthy. Myocardium soft and fatty. Valves healthy. Aorta healthy.

No omental fat. Liver 1,020 gm., slightly congested; spleen 40 gm., soft. Kidneys—right 125 gm., left 100 gm., malformed; mild chronic nephritis present. Pancreas *nil*. Stomach dilated, soft-walled with many petechiæ. Small intestine congested and covered with blood-stained slime, no ulceration. Large intestine, fluid contents with bloody slime and frequent ulcers from cæcum to rectum, especially in rectum. Adrenals small and hard.

Organs of generation atrophied, left tube adherent to large intestine.

HISTOLOGICAL EXAMINATION (Case No. 4).

Nervous system: (a) *Nerve-roots*.—Longitudinal and transverse sections of the roots of the cauda equina stained by Marchi's method showed well-marked patchy degeneration of the fibres, not, however, amounting to typical Wallerian degeneration (*cf.* Figs. 1 and 2). Similar though less advanced changes were found in the cervical roots.

(b) *Spinal membranes*.—Staining methods, Van Gieson and Scharlach R. Some hyaline degeneration was present in blood-vessels of pia, less marked than in those of cord itself; the pia was otherwise normal. No plasma-cells or lymphocytic infiltrations were found.

(c) *Posterior root ganglia*.—Staining by Nissl method or toluidin blue shows a diffuse, irregular, subacute degeneration of the cells, with eccentricity of nuclei, chromatolysis and pigmentary degeneration. Neurilemma nuclei and those of cells surrounding ganglion cells normal (*cf.* Fig. 6).

(d) *Spinal cord*.—The anterior horn-cells in the cervical and lumbar regions were practically normal, but those in dorsal region showed slight chromatolysis. The cells of Clarke's column showed all stages of chromatolysis and nuclear degeneration.

Staining by Weigert-Pal and Marchi methods showed a diffuse scattered degeneration most marked in the posterior columns, especially that of Goll. All sections showed degeneration in the bundle of Lissauer. The relative amount of degeneration of the pyramidal and spino-cerebellar tracts varied in the different regions of the cords. The anterior columns were practically normal (*cf.* Figs. 4 and 5).

Tissue stains showed corpora amylacea and Körnchenzellen fairly abundant in lateral and posterior columns, and glial overgrowth in places replacing groups of degenerated fibres. No lymphocytes or plasma-cell infiltrations were found around vessels or elsewhere.

The condition was one of diffuse pseudo-systematized sclerosis. In view of the comparatively short duration of this patient's illness, the fairly advanced sclerosis of the cord, often met with in chronic cases, was not to be expected.

(e) *Medulla, pons, cerebellum and cerebrum.*—Stained by Nissl blue and toluidin blue. There was evidence of toxæmia in the alterations in the nerve-cells of the cranial nerves, Purkinjé cells, pyramidal and Betz cells. All stages of chromatolysis and nuclear changes were encountered (*cf.* Figs. 3 and 7). Many Betz cells and Purkinjé cells showed the peculiar glass-like appearance called by Burgia "hyaline swelling." No small-cell infiltrations or inflammatory reaction was found in the cortex or membranes.

Other systems.—Unfortunately no peripheral nerves were available for examination, and the nerve-roots had not been preserved in a fluid suitable for the demonstration of the bodies of Reich, described by Kinnier Wilson in connection with pellagra.

The stains used were Marchi, Scharlach R., hæmatoxylin and eosin, and Van Gieson. In the case of the adrenals the Del Rio Hortega method for nuclear staining was also employed.

Kidneys.—Lesions of a mild interstitial nephritis, with fatty changes in the highly specialized epithelial cells. The glomeruli were fairly healthy.

Liver.—Fatty degeneration and abundant non-iron pigment in cells around intralobular veins. No increase of fibrous tissue. Vessels moderately congested. Slight hyaline degeneration of hepatic vessels.

DESCRIPTION OF PLATE I.

To illustrate paper by Dr. P. K. McCOWAN.

FIG. 1.—Longitudinal section root of cauda equina. Marchi method. Mag. 225.

FIG. 2.—Transverse section root of cauda equina. Marchi method. Mag. 250.

FIG. 3.—Cells of a medullary nucleus. Nissl blue method. Mag. 270.

FIG. 4.—Spinal cord—cervical region. Weigert-Pal method. Mag. 7.

DESCRIPTION OF PLATE II.

To illustrate paper by Dr. P. K. McCOWAN.

FIG. 5.—Spinal cord—cervical region. Posterior columns. Weigert-Pal method. Mag. 17.

FIG. 6.—Posterior spinal ganglion. Nissl blue method. Mag. 350.

FIG. 7.—Purkinjé cells (cerebellum). Nissl blue method. Mag. 450.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.

1000

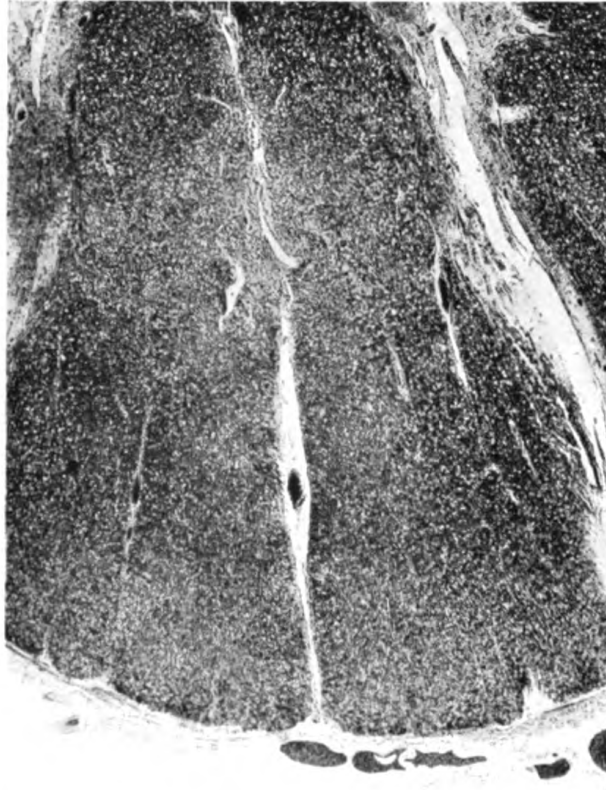


FIG. 5.

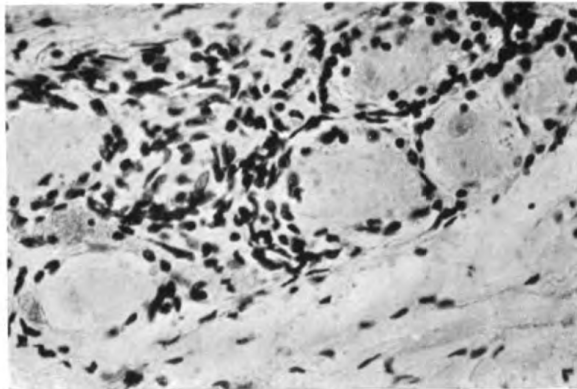


FIG. 6.

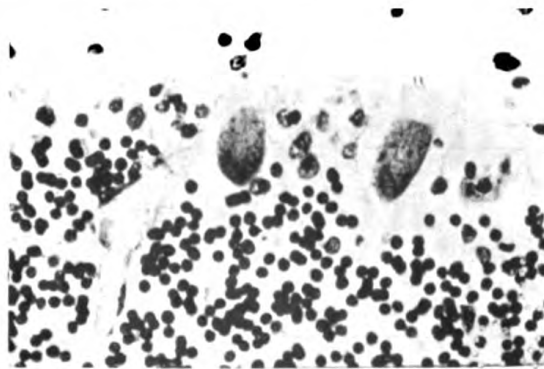


FIG. 7.

to will
anatomical

Spleen.—Early hyaline degeneration of blood-vessels with muscular coat and adventitia still showing well-formed nuclei, but with intima more or less completely hyaline. Thickening of trabeculæ. Veins enlarged and filled with blood, with diminution of cellular elements of pulp. Abundant pigment in cells of pulp and lying free.

Thyroid.—Abundant lipoids in cells of vesicles with practically none elsewhere. No increase of fibrous tissue. Replacement of cubical epithelial cells in places by flattened epithelial cells.

Pancreas.—Fair degree of fibrosis with patches of poorly staining degenerated cells. Lipoids abundant throughout. Islets of Langerhans appear normal.

Suprarenals.—The adrenal lipid is supposed to be an important source of antitoxin, and is diminished in acute and chronic septic conditions. Here it was as abundant in cortex as in normal, and there was a fair amount of fine lipid granules in medulla, where it is normally very slight. The medulla as a whole was narrower than normal. Cortex cells stained well, and showed *nil* abnormal. Fibrous septa of cortex thickened in places, but this is without significance. Brown pigmented granules tightly packed in cells of zona reticularis; their significance is not yet known. There was an increase of fine fibrous tissue in medulla, but, as in normal cases, this surrounded groups of cells, and did not show a pericellular arrangement. The cell-nuclei in the medulla varied much in size and shape, there being many large faintly staining ones, and many not surrounded by cytoplasm. The nuclear to cell ratio in the medulla showed *nil* abnormal in some parts but some increase in others. There was considerable vacuolation of medullary cells in places. To sum up, cortex was normal, while medulla showed some fibrosis and atrophy.

Large intestine (section through small ulcer).—Peritoneal layer normal. No evidence of atrophy of muscular coats. Submucosa much inflamed, with collections of lymphocytes scattered throughout, most marked in neighbourhood of ulcer. Mucosa inflamed with desquamation of villi in places, and mononuclear leucocyte infiltrations universal.

Skin (from dorsum of hand).—Stratum corneum showed scaling and hyperkeratinization, but thickening less marked than in stratum lucidum. In several places the corneal layer failed to stain, and these areas showed all stages from loss of staining power to complete loss of structure. The rete mucosum showed excessive pigmentation, especially in the deep columnar cells. This pigment would appear to be of a lipid nature, judging from its staining properties. Papillæ somewhat flattened in places. Cutis vera

showed elastic tissue in thicker strands than normal, blood-vessels dilated, and surrounded by cells. No appreciable change in skin-glands: Practically no subcutaneous fat present.

These pathological findings suggest a subacute or chronic toxæmia of wide-spread generalized form, affecting all the organs of the body. In this particular case it would seem probable that the toxin was of alimentary origin, and that its entrance to the central nervous system was along the posterior nerve-roots, as the work of Orr and Rows has shown to be possible. The pigmentary skin lesions are probably due to adrenal influence, but nothing characteristic was found in these glands. The presence of a normal amount of lipoid in the adrenals is against an organismal toxic infection, as in such cases this is much diminished or absent. Both the clinical and pathological findings in these cases would therefore appear to agree with the deficiency theory.

The histological work was done at the Pathological Laboratory of the L.C.C. Mental Hospitals, and my thanks are due to the Director, Dr. Golla, for his ready help throughout my work in the laboratory. I have also to thank Mr. Geary for the photographs, and for much assistance in the preparation of specimens.

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Sporadic Cretinoid Amentia: Three Cases in One Family.

By H. FERGUSON WATSON, M.D., D.P.H., F.R.S.Edin., and
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missioners, General Board of Control for Scotland.

Cretinoid feeble-mindedness was first described by Fagge in 1871. It is a rare disease, not comprising more than a fraction of all aments, and it is not now so frequently seen as formerly, owing to early treatment.

In view of its comparative rarity, and owing to the fact that we have seen three untreated cases in a district where endemic cretinism is unknown, we think that the facts connected with these cases are worth recording, since they illustrate certain interesting features.

The three patients, two brothers and a sister, were first seen by one of us in June, 1920.

CASE 1.—N. M— (male), æt. 24 at that date, height 4 ft. 6½ in., is a stout, well-nourished young man, can dress himself, but is so deliberate in his movements that he takes from two to three hours to put on his clothes. Speech is slow, and the voice is thick and "leathery." He is sulky and prone to attacks of bad temper. Generally he is dull and listless, sits by the fire, seldom rousing himself or taking any interest in his surroundings. He does not often speak; when he does so it is in his native tongue—Gaelic—but even then his parents have difficulty in understanding him. His condition is one of imbecility with some evidence of myxœdema.

CASE 2.—C. M— (female), æt. 18 in 1920, height 3 ft. 4½ in., face sallow, generally of a happy disposition, at times dull and listless. She is easily managed, and her habits are free from fault. Like her brother she feels the cold keenly, and is disinclined to go out to play with other children; indeed she has to be taken out in charge of a younger sister. She is a cretinoid ament.

CASE 3.—M. M— (male), æt. 11; height is 3 ft. 4 in. He, too, is a cretinoid ament, is good tempered, has more intelligence than his sister and brother, and goes out more frequently to play. His habits are correct.

All three patients presented to a marked degree the features of sporadic cretinoid amentia. In each the thyroid was absent; they were dwarfs, lethargic, "leathery" voiced, and "pot"-bellied. The condition of skin, hair, tongue, head and limbs was fairly typical. It is characteristic of cretinism to have a high sugar tolerance, low blood-pressure, and lack of sexual development. These patients never took any food till dinner time, except an occasional drink of tea after getting out of bed. None ever asked for food between meals, and all refused food except that which they were in the habit of eating. Unless food were offered, no one would ask for it.

The family consisted of seven, the patients being the *first*, *third* and *sixth*; the other four members had the following features:

H. M— (male), æt. 21, was able to earn his own living as a deep sea fisherman. At school he had with great difficulty reached the fourth standard, but was unable to proceed further.

M. M— (female), æt. 15, had limited intelligence, and was much behind with her education when at school, though more educable than H. M—.

K. M— (female), æt. 13, is rather less intelligent than her sister, is of poor physique and presents stigmata.

L. M— (female), æt. 8, is the brightest of the family, but is rather backward at her lessons; she is unduly shy.

The father, D. M—, is a man of poor intelligence—so much so that he might be described as feeble-minded, though uncertifiable.

The mother, K. M—, though of fair intelligence, could not be described as brilliant.

The father and mother were third cousins, both bore the same family name, and there was inter-marriage in previous generations.

D. M— (feeble-minded)							K. M—	
N. M—,	H. M—,	C. M—,	M. M—,	K. M—,	M. M—,	L. M—,		
♂, 24, cretinoid ament.	♂, 21, mentally dull.	♀, 18, cretinoid ament.	♀, 15, limited intelligence.	♀, 13, poor intelli- gence.	♂, 11, cretinoid ament.	♀, 8, dullard.		

As these three patients had not been treated with thyroid, one of us suggested that such a procedure might be adopted.

This treatment has now been carried out for a period of 3½ years, and the patients have been seen from time to time during the interval. They were last seen in October, 1923. The amount of thyroid administered has been 5 gr. per day for each patient.

As was but to be expected, the results of treatment have been more remarkable in the case of the youngest patient, but even his brother and sister have improved physically, and to a slight extent mentally.

Present condition.—N. M— (male), æt. 27, has grown 5 in.; is still slow and deliberate in his movements; still feels the cold keenly, and seldom goes out. Likes to have his own way, and when disturbed is apt to be bad-tempered. There is slight improvement in the mental condition. He is rather more intelligent than formerly, and, though this is difficult to test, since he only speaks in Gaelic, he is neither as stupid nor so dull as formerly. His relations consider him "greatly improved."

C. M— (female), æt. 21, is happy, good tempered, smiles readily and brightly, but is very shy. Mentally she is markedly defective, but, according to her relatives, is said to be quite talkative, though they admit she does not talk much sense. The schoolmaster, who was present when these cases were last seen, concurs in this opinion. Though she still presents a cretinoid appearance, there has been a marked improvement in this respect, and the various characteristics of the disease are not now so pronounced. She has grown 9½ in. in the last 3½ years, and is still growing.

M. M— (male), æt. 14, has shown the greatest improvement. He has grown 11½ in. since he was put on treatment, and that he is still growing is shown by the fact that he added 1½ in. during the five months antecedent to the date of being last seen. His mental condition has improved to such an extent that he has attended an ordinary school for over a year. He has a slight impediment in speech, talks slowly, but in spite of his shyness it was quite possible to inquire into his capabilities. He can now speak and can also read simple English, can spell easy words, writes rather poorly and has a rudimentary knowledge of figures. The schoolmaster considers that at the age of 14 years he has attained the same degree of advancement in his studies as a normal boy of 7—that is to say, he has made as much progress in his year at school as the average child beginning at 6. He has no bad habits, plays with other boys, and seems to enjoy it. He can dress himself and be in time for school, which is one mile distant.

Table to show increase in height during last 3½ years.

Date.	Age.	N. M—	Age.	C. M—	Age.	M. M—
2.6.20 . .	24	4 ft. 6½ in.	18	3 ft. 4½ in.	11	3 ft. 4 in.
Thyroid treatment commenced in August, 1920.						
15.9.20 . .	—	No change	—	No change	—	No change
27.4.21 . .	25	4 ft. 7 in.	19	3 ft. 4½ in.	12	3 ft. 7½ in.
20.9.21 . .	—	In bed ill	—	3 ft. 8½ in.	—	3 ft. 10 in.
17.5.23 . .	27	4 ft. 10 in.	21	4 ft.	14	4 ft. 2 in.
10.10.23 . .	—	4 ft. 11½ in.	—	4 ft. 2 in.	—	4 ft. 3½ in.

In addition to the increase in height, his physical condition shows a marked improvement. His features and his expression have so greatly altered that he could now be described as being normal.

These patients present certain features of interest:

1. The occurrence of three cretinoid aments in one family.
2. A certain degree of mental defect in the other members.
3. The condition appears to be associated with the marked consanguinity of the parents.
4. The family represents an excellent example of "in-breeding."

The results of treatment also call for some remarks:

1. The increase in height in the two oldest patients is notable.
2. Increase was hardly expected in a person 24 years old.
3. He is still growing at the age of 27.
4. All patients are still growing.
5. The mental condition of the two oldest patients shows but little improvement.
6. The mental condition of the youngest suggests that in due course he may attain a stage of development equal to that of, at least, some of the other uncertified members of the family, *i.e.*, he may even reach the lowest level of the so-called "average" person.

Our thanks are due to Dr. J. N. Sutherland, who has recently been in charge of the patients, and who has been most attentive, energetic and obliging; and to Mr. J. Smith, schoolmaster and Inspector of Poor, who has been intensely interested in the educational side. Both of these gentlemen have given us much valuable help in our observations.

A Summary Note on the Use of Collosol Bromine in the Treatment of Insane Epileptics. By GEOFFREY F. COBB, M.R.C.S.Eng., L.R.C.P. Lond., D.P.M., Senior Assistant Physician, Rubery Hill and Hollymoor Mental Hospital, Birmingham.

A PRELIMINARY note on the use of collosol bromine in the treatment of the insane epileptic was published in the *Journal of Mental Science*, July, 1923. As a result of further clinical observation in 22 male cases the following summary note is appended:

The idiosyncrasy of the epileptic, variable as it is, indicates that the trial of different remedies in each individual case is necessary before it can be determined which drug will produce the best effect. The established fact that epileptics benefit by different drugs has been confirmed by clinical observation in the cases under treatment. By a process of trial and elimination, it would appear that collosol bromine may be included amongst the preparations likely to produce

beneficial results in certain cases. This fact legitimises the addition of yet another drug to the existing large number employed for the alleviation of this disorder. The action of collosol bromine has been found to be palliative rather than curative as regards the cases herein mentioned. This is shown by the fact that in all cases the fits have recommenced, often with renewed severity, upon withdrawal of the drug. It is important, however, to note that the epileptic condition of the patients undergoing this particular treatment was one of long standing. The patients, with two exceptions, had passed adolescence. These two exceptions were juvenile mental defectives; both showed a marked reduction in the number of their fits when taking collosol bromine as compared with the number prior to any special treatment. In one case the average number of fits occurring per month was reduced from 56 to 3, and in the other case there was a reduction from 52 to 3. Further, one case showed a marked improvement in general mental state as far as the nature of the case would allow. The collosol bromine has successfully reduced the incidence of fits in all cases. The fits which did occur were in many cases less severe in character, and of shorter duration; and the periods of confusion and drowsiness which preceded and succeeded the fits were less marked. Notwithstanding this diminished frequency in the number of fits, there has not been a corresponding simultaneous improvement in the mental state of every case. It is estimated that improvement in general mental state was apparent in nine cases of those under treatment with this drug. This improvement has been maintained by the original dose, namely 2 drms. three times a day after food. In two cases this manifest improvement warranted the patients being allowed out on parole with their friends. One of these same patients had hitherto been regarded as dangerous on account of the violent maniacal outbursts which he experienced periodically. Nothing of this nature has occurred since the administration of collosol bromine, which has extended over a period of one year. Another patient formed a good example illustrating the fact that the effects produced by the collosol bromine were transitory and soon passed off upon withdrawal of the drug. He was allowed home on leave for the week-end, and on one occasion forgot to take his medicine with him, with the result that he immediately commenced to have epileptic seizures. This did not occur on any other of the occasions when he was allowed home on leave, provided that he continued to take the medicine.

The remaining 13 cases have not shown any improvement in their mental state.

The effects and reactions produced by the use of collosol bromine

have been compared with those produced by potassium bromide and with those produced by luminal.

The oral dose of each preparation has been as follows :

Coll. brom. 2 drm. *t.d.s. p.c.* (equivalent to 10 gr. sodii. brom.).

Pot. brom. 10 gr. *t.d.s. p.c.*

Luminal 1½ gr. *t.d.s. p.c.*

Comparing the action of collosol bromine with that of potassium bromide in equivalent doses, it has been found that the potassium salt has not proved such an efficient agent in bringing about a similar diminution in the number of fits. The resulting changes in the mental state, however, have been similar. No signs or symptoms of bromidism have been produced either in the cases treated with collosol bromine or in those treated with potassium bromide. The dose of potassium bromide has purposely been kept small for comparative reasons. This small dosage would, in any case, be unlikely to produce such a reaction. On the other hand an increased dose of potassium bromide would probably have effected a further reduction of fits to the same extent as that produced by collosol bromine. The same patients when treated with luminal have shown diminished frequency in the number of fits (see Table) as compared with the reduction brought about by collosol bromine or potassium bromide respectively. Accompanying this diminished fit-incidence there has been a general tendency to excitement, noisiness and aggression in several of the cases so treated. These states of excitement were especially noticeable at the commencement of treatment with luminal, and persisted for some days. Luminal appeared to have a delayed action before any sedative result became established. This was not observed in the cases treated with collosol bromine or potassium bromide. Again, states of partial fugue were more evident at the time patients were being treated with luminal than when treated with either collosol bromine or potassium bromide respectively. These confusional states appeared to accompany the sedative action produced by the luminal. There has been no appreciable alteration in the general physical condition of the patients throughout the treatment. Two cases, however, when treated with luminal, developed an erythematous rash accompanied by œdema in one case. Both the rash and œdema disappeared when the drug was stopped. In no case were gastric symptoms, vomiting or loss of appetite produced by the administration of any of the preparations. Sleep was also improved in nearly all the cases.

As stated in the preliminary note, there has been, as far as

possible, no additional treatment, medicinal or dietetic, and the environmental conditions have been constant.

The following table shows the average number of fits per month which occurred before any special treatment was commenced, compared with the number which occurred when patients were being treated with collosol bromine, potassium bromide and luminal respectively :

Name.	Age.	Average number of fits per month before sp. treatment.	Average number of fits per month when treated with collosol bromine.	Average number of fits per month when treated with potassium bromide.	Average number of fits per month when treated with luminal.
T. W— . .	59	6	0	0	*
J. S— . .	32	6	0	4	1
G. R— . .	20	56	3	28	19
W. S— . .	16	42	3	10	*
C. B— . .	55	11	1	2	0
E. K— . .	32	10	1	*	*
A. M— . .	52	16	2	5	*
K. W— . .	31	17	2	4	2
G. B— . .	29	8	1	10	7
A. F. W— . .	45	6	1	3	0
S. P— . .	55	16	4	1	1
E. D— . .	25	27	7	29	1
T. H. A— . .	45	11	3	3	2
W. P— . .	26	13	4	6	13
H. M— . .	22	13	4	9	0
W. B— . .	37	6	2	1	0
C. H— . .	30	31	13	58	5
C. W. B— . .	57	12	5	10	5
J. D— . .	23	6	3	6	6
W. H— . .	26	16	8	7	3
T. A— . .	54	6	3	7	*
W. W— . .	47	6	4	1	0

* Not so treated.

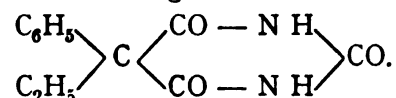
The Luminal Treatment of Epilepsy. By S. GROSSMAN, M.R.C.S. Eng., L.R.C.P.Lond., Therapeutic Department, Cardiff City Mental Hospital.

A GREAT amount of literature has been contributed to the medical press in America, the continent of Europe and in this country about the action of luminal and its sodium derivative in preventing epileptic fits.

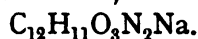
At one time the bromides were considered the only palliative remedy, but gradually luminal by itself, or in combination with pot. brom., is replacing the bromides. As long ago as 1912 Prof. Hauptmann, of Freiburg, wrote in the *Münchener medizinische*

Wochenschrift about the value of luminal for the prevention of epileptic fits. In this country F. Golla, M.D., F.R.C.P., has contributed a very valuable paper on the results of the action of luminal and bromides on epileptics. He found luminal to be the better drug, and much better tolerated by the patients.

What is luminal? It is a synthetic sedative belonging to the veronal group, in which an ethyl radicle has been replaced by a phenyl radicle, and known chemically as phenyl-ethyl-malonyl-urea, its chemical formula being :



It is a white, odourless, very fine crystal, with a somewhat bitter taste. It is almost insoluble in cold water, but soluble 1 in 40 in boiling water. It is easily soluble in acetone, acetic acid, or alcohol. Its sodium derivative is a chemical combination of 90 *per cent.* luminal and 10 *per cent.* sodium, its chemical formula being—



Sodium-luminal is also a white, odourless, fine crystal, with a bitter taste, but is very soluble in water (1 – 1.2), and is, therefore, more in use. Sodium-luminal must not be prescribed together with ammonium bromide, as the two are incompatible; luminal will be precipitated from the solution, and the supernatant liquid is alkaline, and smells of ammonia.

Luminal and sodium-luminal act, according to some authorities, by reducing the excitability of the nervous system. They are eliminated by the kidneys, mainly unchanged. H. Vollmer, summarizing results up to date, states that sugar estimation in both urine and blood points to there being an alkalosis before the epileptic attack and an acidosis after.

E. J. Bigwood (*Annales de Médecine*, 1924) states that an alkalosis is observable before epileptic crises, and is to be regarded as of causal significance in their pathogenesis. Any action which prevents alkalosis by producing a compensating acidosis has the effect of preventing epileptic fits. Among such factors the author cites fasting, a diet rich in fats, ingestion of strong acid (HCl), and the treatment with gardenal, which is a French preparation similar to luminal. Bromides are not acidostants.

For the last eighteen months 25 patients have been treated at the hospital with sodium-luminal. Before that period the patients were treated with borax and bromides, and the result of the treatment with sodium-luminal is very enlightening. The patients' ages vary from 17 to 60 years, and the frequency of fits varied from 2–3 in a day in some patients, 1–2 a week in others, and as rare

as 1-2 a month in a few. The patients were classified according to the ætiology and type of epileptic fits.

I would like to mention at once that in every case the Wassermann test was performed on the serum and cerebrospinal fluid, to enable me to exclude the seizures of general paralysis, which are occasionally of the epileptiform type. With the exception of one case, which I will describe immediately, the blood and cerebrospinal fluid gave negative results.

W. R—, a male patient, æt. 52, suffering from essential epilepsy from the age of 9 years, contracted syphilis at the age of 19. In 1911 patient's gait became impaired, and he was examined by a medical man, who found him to be suffering from locomotor ataxy. Epileptic fits occurred periodically, and only in 1915 patient commenced to show a mental change, and was admitted to the hospital.

He exhibits all the typical features of locomotor ataxy by (a) lightning pains, (b) by loss of deep reflexes, (c) inco-ordination, (d) Argyll-Robertson pupils, and (e) Rombergism. He is subject to epileptic fits, which occur two to three times a week, and are typical of the idiopathic or essential type of epilepsy.

So long as patient is under the influence of sodium-luminal, he is free from fits. Incidentally he does not complain of lightning pains any more, and his reasoning power has improved. Of course, it has not cured him of locomotor ataxy.

Of the others, whose Wassermann was negative in the blood and cerebrospinal fluid, one is suffering from organic epilepsy, one from hystero-epilepsy, as described by Charcot and Paul Richer. Some authorities—and I think rightly—object to the term "hystero-epilepsy," and consider it to be a case of pure hysterical convulsions.

J. Sch—, æt. 43, had a fit during an attack of typhoid fever when 7 years of age. Since that attack he gradually lost power in the right side of his body, and now has a right-sided hemiplegia. He is subject to epileptic fits, which vary in type; sometimes they are of the pure Jacksonian type, but chiefly they are of the essential type. He is subject to about three fits on the average per week.

The case of hysterical convulsions, or hystero-epilepsy, is that of an ex-soldier, æt. 27, whose history did not elicit any fits in childhood, or any trauma to his head. These hysterical convulsions occurred mainly at night, and, before treatment, he had as many as three during a night.

The remainder of the patients are of the essential type of epileptics, two suffering from *petit mal*, the rest from *grand mal*.

TREATMENT.

The treatment consists in (a) method of living, (b) diet, (c) regulation of bowels, (d) proper and regular administration of sodium-luminal.

Epileptics must be placed under simple physiological methods of living. They must abstain from any kind of excitement. Proper exercise is essential. The diet must be rich in fats and vegetables, and given at regular times. The bowels must be regulated, and at

least a bi-weekly aperient is given at the hospital. If necessary, an enema saponis is administered.

Depending upon the frequency and severity of the fits, the sodium-luminal is given by me from $1\frac{1}{2}$ to 2 gr. twice daily; the dose is dissolved in 1 oz. of water. It is usually given morning and evening. On very rare occasions was it necessary to give a dose three times a day.

What are the results of the treatment? Epileptic fits are rare in the hospital, and the drug acts virtually as a specific in essential epilepsy, especially in *grand mal*. In *petit mal* the effect of the drug is not so pronounced. It arrested the attacks of epilepsy in the three cases, which do not come under the heading of essential epilepsy. *Status epilepticus*, though rare as a rule, was not known in a single case during the treatment. Urticarial rash appeared in only one case, and disappeared in a few days by increasing the aperient, but without stopping the sodium-luminal.

The body-weight of most of the patients has increased, and the majority are employed in the ward, two of them working even in the gardens. Their mental condition has improved a great deal.

The only danger the medical officer has to guard himself against is the sudden withdrawal of the drug. The fits will become more frequent and more severe than before treatment has been commenced.

Some time ago a letter appeared in the *British Medical Journal* about the possibility of a reduction of the blood-sugar as a causation of epilepsy. Dr. Goodall's answer in the same journal puts the possibility out of the question, as the matter has been investigated in the research laboratories of the hospital, and the sugar was found to be within normal limits, before, *intra*, and after fits.

Empirically, three patients were treated with large doses of glucose, but without success.

Several cases of acute mania have benefited by sodium-luminal, but I found veronal a better hypnotic than luminal, as the latter in larger doses causes headache, vertigo, and mental confusion.

CONCLUSIONS.

1. Sodium-luminal is far superior to the bromides in arresting epileptic fits. It acts much quicker, and more effectively.
2. It is not a cure for epilepsy, but may be considered a specific for arresting epileptic fits, especially of the essential type of epilepsy, though very good results have been obtained by me in cases of organic and hystero-epilepsies.
3. It does not affect the gastro-intestinal tract.

4. The circulatory and respiratory systems are not affected by judicious doses of the drug.
5. Patients are not liable to the drug habit.
6. Patients' mental conditions have improved remarkably in the majority of cases, while patients treated with bromides are adversely affected mentally. They become dull and stupid.

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A Case of Actinomycosis. By S. GROSSMAN, M.R.C.S.Eng., L.R.C.P.Lond., Assistant Medical Officer, Cardiff City Mental Hospital.

ACTINOMYCOSIS is a rare local specific infectious disease, due to the actinomyces, or ray fungus. The actinomyces is a streptothrix, and grows in colonies which are just visible to the naked eye, and these colonies, on microscopical examination, are found to consist of three elements—filaments, cocci, and clubs. In young cultures they stain uniformly, and are Gram-positive. The streptothrix gives rise to a hard, slow-growing tumour, going on to ulceration, with a thin sero-purulent discharge, containing yellow granules in which the ray fungus can be found. The organism is found growing on cereals, especially barley, and commonly infects cattle. Man is infected in the same way, and the disease is generally met with in farmers, corn-eaters, graziers, etc., especially if the patient has the habit of chewing straw, the infection most commonly occurring in the tongue, jaw, and spreading thence to the skin of the face and neck.

The case, which occurred in the Cardiff City Mental Hospital is especially rare, as the primary focus of infection was the face.

H. C—, a half-caste Arab, was admitted to the hospital in November, 1920. Patient was very depressed and emotional on admission. He was completely

disorientated, and, when spoken to, repeated the one word "Allah." His physical state was fair, except for a regurgitant murmur in the mitral area. The heart was well compensated. His mental and physical conditions remained stationary until May 20, 1923, when the right side of his face was noticed to be somewhat swollen. The teeth, tonsils and naso-pharynx were examined, with negative results. On May 23, 1923, a small sinus appeared in the swollen area, which discharged some pus. The sinus closed the following day, but another sinus opened, close to the first one, and a closer examination of sinuses and pus was necessary. Several discharging sinuses were found, with puckering of the tissues around them. On pressing the swelling, the pus which was discharged from the sinuses appeared like *sulphur-coloured granules*.

Infection with the ray fungus was suspected, and three slides were made from the pus, which stained with Gram's stain, and showed typical *Streptothrix actinomyces*. The slides were shown to the Hospital Consulting Pathologist, Dr. H. A. Scholberg, and to the City-County Bacteriologist, Dr. W. Parry Morgan, who, independently, agreed to the presence of the ray fungus in the pus. It must be mentioned here that the patient's face showed no scarring or healed sinuses which could suggest a latent focus of infection. The swelling grew to the size of a small hen's egg, and I decided that it would be better to excise the growth before commencing an iodide treatment. Equal parts of *codrenine* and sterile water was the local anæsthetic. The growth was completely excised by me, and the base thoroughly curetted with a small Volkmann's spoon, and then cauterized with pure carbolic acid. A few loose stitches were inserted and a dry dressing applied. Slides were made from the excised tissue, which showed on microscopical examination the *Streptothrix actinomyces*.

Patient was put on a mixture of pot. iodide in 20-gr. doses three times a day. The dose was altered in three days to 30-gr. sod. iodide three times a day. The wound was healing quite satisfactorily, but a week later patient developed a temperature of 101° F., rapid and irregular pulse, and seemed to have difficulty in breathing. Nothing abnormal could be found in the lungs; the heart showed commencing failure, and patient had complete suppression of urine. For three days patient passed about 4 oz. of urine, per catheter, per day. In addition to cardiac stimulants, I gave him an intravenous injection of 5 c.cm. of 40 *per cent.* sterile solution of urotropin, repeating the injection the following day, increasing the dose to 10 c.cm. Two days after the dyspnœa disappeared, patient commenced to pass urine freely, and in four weeks he was up. The wound completely healed.

Since his illness patient has become much brighter, and is able to do a little work in the ward. The tonsils, tongue and teeth have been examined again. Some teeth have been extracted and the granulation around the roots examined microscopically, but no streptothrix could be found. It is ten months since the operation was performed, and the wound has not opened.

I consider it a very rare case of primary infection of the face with actinomycosis.

It is impossible for me to offer any theories of how the infection occurred, as there have been no cases of actinomycosis in the Hospital prior to, or since, the case described.

A Case of Pseudo-hypertrophic Muscular Paralysis. By¹ ISABEL G. H. WILSON, M.B., Ch.B.Edin., D.P.M., Assistant Medical Officer, Severalls Mental Hospital, Colchester.

Patient, a woman, æt. 57, was admitted to Severalls Mental Hospital, Colchester, Essex, in April, 1923.

Family history.—Eight brothers and sisters alive and well. No history of "any form of paralysis" in family.

Present illness.—From childhood "she had curvature of the spine and could never jump." At the age of 10 she broke her collar-bone and leg; her bones were said to be brittle. At 25 she was treated for curvature, and ten years later her movements were still said to be stiff and awkward. At 39 she had intermittent loss of power in limbs and frequent falls. When 40 years old she was treated in Bethlem Royal Hospital for depression and ideas of unworthiness; was stated by a relative to have had rheumatoid arthritis for ten years; "except for a rigidity her physical condition was good." Eight years later, when at home again, she began to lose power in her hands and arms, and would never use them except to help herself get about; at 52 she fell and sprained her ankle, and after this would never attempt to walk.

Shortly before admission, when rising from a sitting position she pulled herself up by her hands on a chair or a table. She moved about by pulling along the ground the chair on which she sat, and she moved from one chair to another by using as a bridge a board between two chairs.

State on admission.—*Mental:* She suffered from melancholia, with ideas of unworthiness. She spoke seldom, and was unable to give any account of herself beyond an occasional remark that she was "horrible," that she was "so big that everybody hated her," and that "everybody wished she was dead." She made no response to requests to move her limbs, to put out her tongue, etc.

Physical: She was very stout, and apparently quite helpless, having to be lifted about in bed, but her mental state made it impossible to test the strength of groups of muscles.

Cardiac tone only fair.

Knee-jerks and plantar reflexes not obtained on either side.

She was deaf.

Lordosis and scoliosis present, and double pes equinus, easily corrected passively.

Marked enlargement of shoulders, buttocks, and calves, which were very firm.

Some wasting of muscles of upper arm and of dorsiflexors of foot.

Course of illness.—During the six weeks she was in hospital her condition did not improve either mentally or physically; she remained depressed and worried about her size, and she showed no signs of regaining muscular power. She became weaker and died rather suddenly, with symptoms of cardiac failure.

Post-mortem examination.—Considerable deposits of fat throughout the body. Heart, weight 12½ oz. Walls friable and fatty. Muscles: Deltoid and supraspinati, glutei, vastus lateralis and soleus appeared much increased in size. The naked-eye appearance of some of these muscles on section was that of firm fat. No changes of note elsewhere.

Microscopic.—Deltoid and soleus: Showed marked increase of fibrous tissue and proliferation of sarcolemma nuclei, considerable increase of fat, cloudy degeneration in some fibres; in other fibres the striation was still well marked.

Pectoralis major: Slight changes.

Diaphragm: Not altered in sections taken.

The absence of family history of the disease, the occurrence of the disease in a woman, and its long duration, are points of interest.

I have to thank Dr. R. C. Turnbull, Medical Superintendent, Severalls Mental Hospital, Colchester, for permission to publish the case, Dr. Porter Phillips for notes from Bethlem Royal Hospital, and Dr. J. W. Dawson and Dr. E. O'Flynn for their kindness in preparing microscopic sections.

Medico-Legal Notes.

HARNETT *v.* BOND AND ANOTHER.

The appeal in this case, as foreshadowed in our last number, was duly heard before Lord Justice Bankes, Lord Justice Warrington and Lord Justice Scrutton. Their lordships' considered judgments were delivered on Friday, May 16, 1924.

The appellants, Dr. Charles Hubert Bond, a Commissioner in Lunacy, and Dr. George Henry Adam, manager of a house for the reception of lunatics at Malling Place, Kent, asked for judgment or a new trial of an action tried by Mr. Justice Lush and a special jury last February. The respondent was Mr. William Smart Harnett, a farmer of Sittingbourne, the plaintiff in the action, who recovered £25,000 damages from the doctors for alleged wrongful detention as a lunatic.

The Attorney-General (Sir Patrick Hastings, K.C.), Mr. Harold Morris, K.C., Mr. Bowstead and Mr. H. L. Murphy appeared for Dr. Bond; Sir Douglas Hogg, K.C., Mr. A. Neilson, K.C., and Mr. Carthew appeared for Dr. Adam; and Sir John Simon, K.C., Mr. J. B. Matthews, K.C., Mr. Davey and Mr. Cope Morgan for the plaintiff; Mr. Cremlyn and Mr. W. H. Gattie held watching briefs for interested parties; and Mr. T. Simpson Pedler held a watching brief for the British Medical Association.

JUDGMENT.

Lord Justice Bankes, in his judgment, said: The verdict and judgment in this case have given rise to a wide-spread feeling of anxiety and apprehension. A jury by their verdict have found that a sane man has been detained in asylums and institutions for the insane for over eight years in spite of all his endeavours to obtain his release. A learned judge by his judgment has decided that it is possible for a person who, in the opinion of the jury, acted without sufficient care in taking action which resulted in some other person's being detained under the lunacy laws as a person of unsound mind, to be held responsible in damages because the person whose duty it was to secure the patient's discharge, if he was in fact sane, failed to realize that he was sane, and continued to detain him, and this even though the person held to be responsible acted in good faith and in the honest discharge of what he conceived to be his duty. Against this verdict and judgment both defendants appeal. Their grounds of appeal include contentions that the verdict was against the weight of the evidence, that the damages were excessive, and that there had been misdirection by the learned Judge both on the fact and on the law.

For the purposes of this appeal the material facts can be shortly stated. In October, 1912, the plaintiff was seriously ill, suffering from delirium produced, as he believed, by the injection of excessive quantities of some substance, possibly tuberculin, by an unqualified person. According to his evidence at the trial, though he was still weak as the result of his illness, he was perfectly sane by October 31. This view was not shared by his relatives, and, after examination by two medical men on November 10, 1912, an order was made by a justice appointed under the Lunacy Act, 1890, for the reception of the plaintiff as a person of unsound mind in the licensed house kept by the defendant, Dr. Adam, at Malling, known as Malling Place. Attached to the certificate of one of the medical men

was a copy of a letter sent by the plaintiff on November 8 to the post-office officials at the local post-office. It was in these terms :

" Dear Post Official,—Jesus has touched my eyes. If I have done wrong I am willing to make things right. I love you. If you love Jesus and love me you will come and see me and make me happy.—Yours sincerely, W. S. Harnett. A sinful man."

The plaintiff explained that he wrote the letter because he regretted having made complaint about some non-delivery of letters. He also said that the copy was inaccurate, as the original was addressed to the officials in the plural. Attached as it was to one of the certificates, this copy letter was presumably included among the documents forming the file relating to the plaintiff's case, and was therefore no doubt constantly referred to whenever any question was raised about the plaintiff's condition of mind. Whatever anyone else may have thought of the letter, the plaintiff himself did not regard it as any indication that the writer was not in his right mind when he wrote it. He was asked at the trial what he thought the recipients of the letter would think on that point, and his answer was :

They seemed very pleased with it when I saw them on Sunday. They shook hands with me. They are deeply religious people. They were such deeply religious people that I did not mind writing like that. The father, the mother, and the daughter were religious people; they were the principal people there. When I went to see them the old man said: " Lord bless you and keep you to the end." They were very pleased with the letter. It was written on November 8.

There is, and can be, no complaint against the defendant Dr. Adam of having received the plaintiff into his house under the reception order. After he had been there about a month his condition had, in Dr. Adam's opinion, so improved that on December 12 a leave of absence order for 28 days was sanctioned by the proper authority on Dr. Adam's advice. The order was in the following form :

We, the undersigned, being two of the visiting Justices of Private Asylums for Kent, hereby sanction leave of absence from Malling Place of [then the plaintiff's name was inserted] on probation for the period of [then 28 days was inserted] but this sanction is revocable by us at any time during that period; provided that the Medical Officer shall at any time before the expiration of the said period have power to take back the said patient into the licensed house if his mental condition requires it. Dated this [blank for the date to be filled in].

This was signed by "two of the Visiting Justices for Kent."

Two Letters of the Plaintiff.

Unfortunately some misunderstanding appears to have occurred, and the plaintiff was under the impression that he was being placed under his brother's care. He strongly objected to this, and as a result he wrote two letters on December 11 to which I must refer. The first was written to Dr. Adam about 11 a.m. It was in these terms : " Dear Dr. Adam,—When I am set free I demand to be handed over to the police. I am prepared to give guarantees if required." The other was written about 6.30 p.m. to the Commissioners in Lunacy. It was in these terms :

Gentlemen,—I am still under control. Dr. Adam informs me that my younger brother is coming to-morrow afternoon and that I am to go home under his care. He, I believe, petitioned to have me put there. I suppose he must come here to-morrow. I object to being sent home under his care. I have demanded to be handed over to the care of the police when I am set free. I can give guarantees if required. If my demand is a legal one will you kindly wire or telephone to Dr. Adam instructing him to accede to my wishes.

I merely read these letters as leading up to and explaining the plaintiff's visit to the offices of the Lunacy Commissioners on the day but one after he left Malling Place. The plaintiff's explanation why he went there was that he wished to ask the Commissioners to send a man home to live with him in his house for the 28 days, during which, according to the plaintiff's statement, his brother had told him that he was to be under his care in order that the man might see that he had fair play, and was not, as he expressed it, " thrown away " a second time when he was sane.

The account of Dr. Bond, one of the Commissioners in Lunacy, and of the Secretary of the Commission, both of whom interviewed the plaintiff on his calling, was that he was in such a condition as to be manifestly unfit to take care of himself, or to be allowed out any longer on probation, and that they accordingly communi-

cated with Dr. Adam by telephone informing him of that fact. Dr. Adam thereupon sent a motor with two attendants to fetch the plaintiff, who was given to understand that he must remain at the office until the motor-car arrived. He did so remain for some hours. On the arrival of the motor-car the plaintiff was taken back to Malling Place, where he remained until February 22, 1913.

The Plaintiff's Cause of Action.

It was this detention at the Commissioner's Office and the subsequent confinement at Malling Place which constituted the plaintiff's cause of action. His contention was that both defendants were responsible, either jointly or severally, and that their action was an imprisonment and was entirely unauthorized and illegal. For the purpose of establishing his cause of action the question whether the plaintiff was or was not of unsound mind was wholly immaterial except as to damages, because his contention was that even if he was of unsound mind neither defendant had the right to do what he did. It is necessary at this point to refer to the course of the proceedings at the trial, as otherwise it is difficult to realize how 15 days were occupied before the evidence was completed. The plaintiff's counsel was naturally anxious to excite as much sympathy with his client as possible, and he was desirous, therefore, of going into the whole story of the plaintiff's detention and into his state of mind from the date of the reception order in November, 1912, down to October, 1921. He claimed the right to give evidence of the state of the plaintiff's mind over the whole period on the ground that the evidence had some bearing on the state of his mind on December 14, 1912. The Attorney-General, who appeared for Dr. Bond, did not contest the admissibility of the evidence on this point, but he protested against the evidence being used on any question of damages for any detention after that date. At a later stage the Attorney-General intimated that although it was no part of the defendant's case to contend that the plaintiff was still of unsound mind after he left Malling Place, if the plaintiff's counsel desired it to secure a fair trial for his client, he would call witnesses from the asylum and institutions in which the plaintiff had been detained while still maintaining his contention in reference to any claim for damages in respect of this period.

The plaintiff's counsel not unnaturally welcomed this opportunity and took full advantage of it, and the trial ultimately partook more of the nature of an inquiry into the administration of the lunacy law, as applied to the plaintiff's case, than of a trial of the issues in the action. The prolonged inquiry, the long-drawn-out story of the plaintiff's captivity, the skilful use by the plaintiff's counsel of the opportunities given to him of appealing to the sympathies of the jury, all combined to produce an atmosphere in which the sufferings of the plaintiff monopolized attention.

The Jury's Findings.

The view of the jury was ascertained by a series of questions. On the question whether the plaintiff was of sound mind on December 14, 1912, and was fit to be at large, and not dangerous to himself, the jury found in the plaintiff's favour. It is a curious fact that the jury were not asked any question about the plaintiff's mental condition at any date after December 14, and it is a little hard to see how the damages awarded could possibly be justified in the absence of a finding in the plaintiff's favour covering the whole period from December 14, 1912, to October, 1921. I assume, but without coming to any decision on the point, that the jury must have considered that the plaintiff was not of unsound mind at any time during that period.

Both defendants in their notices of appeal ask to have the findings of the jury as to the plaintiff's mental condition set aside on the ground that the verdict was against the weight of the evidence. No argument was addressed to the Court on the point, and I therefore express no opinion on it. The appeal must be decided on the footing that the findings of the jury on this question were justified by the evidence. On the assumption that both defendants were jointly responsible for the detention of the plaintiff at the Lunacy Commissioner's Office on December 14, and for his subsequent removal to and detention at Malling Place, the jury awarded the plaintiff £25,000 damages. A question which affects both defendants is whether that verdict can possibly stand. The sum must have been arrived at on the assumption that the detention of the plaintiff from December 14, 1912, down to his escape in October, 1921, was a direct consequence of the defendants' wrongful acts committed on December 14.

The Allegation of Misdirection.

On this part of the case the defendants complain of misdirection by the learned Judge both on the facts and on the law. I will take the learned Judge's view as expressed in his own words in his direction to the jury, and in his subsequent judgment on the application to enter judgment. In his direction to the jury on the question of damages the learned Judge said this :

Members of the jury, now it remains for me to ask you what damages you ought to award the plaintiff. I am going to ask you to deal with both defendants and to treat it as a joint claim against them both, so that whatever verdict you give will be a verdict against them both jointly. Do you follow what I mean ? The question has been raised by the Attorney-General—and a very serious question it is—namely, whether in law it is possible for you in awarding damages to compensate the plaintiff for his detention during the whole of the 8½ years. The Attorney-General contends that I ought to direct you that in law you are not able to take the whole period into your consideration. He contends that I ought to direct you that you can only give to Mr. Harnett damages based upon the footing that he was imprisoned unlawfully, but that you ought to shut out of your mind the fact in considering the amount of damages you give him that he did suffer this wrong detention. I do not agree with the view of the Attorney-General. In my opinion it is within your province, if you think fit, not otherwise—I do not tell you that you must—and within your power to compensate Mr. Harnett upon the footing that the direct consequence of what the defendants did was that he should be detained during the whole period until he escaped from the home at Aylsham. The Attorney-General has said, you know, that there has been what is called a break in the continuity of the chain. He says, if that is so, you cannot treat the whole period of his detention as following from, or flowing from, the wrongful acts of the defendants. I have said that I do not agree with him, and I will tell you why, and I will explain to you why.

The learned Judge then called the attention of the jury to the facts in the case of *Isitt v. The Railway Passengers' Assurance Company* (22 Q.B.D., 504). He then said :

If you think that the detention for these nine years was the direct consequence of his illegal imprisonment, and that there was no intervention of third persons at all, but that it follows straight away from the first wrongful act, you can take the whole of that nine years into your consideration. You can take all of it into your consideration. It is so obvious, you know, if Dr. Bond, as you have said he did, caused this man to be detained in an asylum, Dr. Bond would know, as anybody else would know, that he might in the ordinary course have gone on being visited by one Visitor and one Commissioner after another, and he might never get out. It was not that anybody intervened and did an act like knocking him down. It was unfortunately that they had omitted to discover that he was of sound mind. That is what happened. That is quite a different thing from doing something to him and causing a fresh injury. Therefore I tell you that you may take, if you think it is right to do it, the whole period into your consideration.

As the jury were on the point of retiring the foreman asked the learned Judge this question : "There is just the question of the period of time. Is it exactly 8½ years that we have to take into account ?" Mr. Justice Lush : "He was sent back on December 14, 1912, and he escaped from Aylsham on October 15, 1921."

After the jury had given their verdict and the learned Judge had heard arguments how judgment should be entered, he dealt with the question of remoteness of damage. I must read some of the material parts of the judgment. He says :

One of the obvious risks that a person is exposed to if he is a patient in a lunatic asylum is that he may still be thought insane when in fact he is sane. That risk, the risk of such a consequence following, is directly caused by his being placed in an asylum, and the peril was especially great in the plaintiff's case for the reasons that I have mentioned. Each fresh medical superintendent, when he received the plaintiff into his home, would know the reports by the doctors at the previous places at which he had been detained and would know their views and observations with regard to him, and would necessarily take into account, in considering his mental condition, what his previous history had been. I cannot regard the decisions arrived at by the different doctors, commissioners and visitors at the various homes and the decisions arrived at by the medical superintendent in the same home from time to time as a fresh intervention which would break the chain of causation. It was nothing of the kind.

Moreover, what each doctor did was not some act which would injure the plaintiff, but was to omit to discover that he had recovered. It was the failure to do something, not the doing of some independent act, that caused the plaintiff's further detention. Each doctor, each Commissioner, each Visitor was not an actor at all for the purpose under discussion. This case differs entirely from cases where there is a *novus actus interveniens*. If the plaintiff had been injured, for example, when being taken out for exercise by an attendant by the wrongful act of some independent person, the chain of causation would be broken, and the original wrongdoer could not be made responsible for the consequences of that injury. But that kind of case bears no resemblance to such a case as this. I think that the true view to take of the matter here is that the detention during the whole nine years was the direct consequence, following in an unbroken chain, of the wrongful sending of the plaintiff back by Dr. Bond, and the wrongful assistance given by Dr. Adam in accomplishing that purpose, and that there was no intervention of an independent person which would break the chain of cause and effect. It was wholly immaterial that no doctor or other official discovered, as he should have done, that the plaintiff was not insane. I ought, I think, specially to refer to the certification on November 10, 1913. In my view, this does not constitute an "intervention." What is done is mere machinery for the purpose of avoiding the necessity of having a new reception order drawn up. The report of the medical superintendent is in no way different from his ordinary reports except that it brings about this consequence.

Whether the learned Judge's direction to the jury and whether his view of the law as applied to the facts of this case are correct is a vital point. With all respect to the learned Judge I am unable to take the same view as he did, either on the facts or on the law. I cannot draw the distinction which the learned Judge draws between acts of commission and acts of omission. I cannot look on the serious act of certification as mere machinery. I find the chain of causation broken at innumerable points, and I cannot hold that it was permissible for the jury to take the whole period of the plaintiff's captivity into their consideration in assessing damages. If this view is right it follows that the verdict and judgment against the defendants as joint tortfeasors must be set aside.

The Question of Damages.

It is not material in my view of the case to discuss at any length the attempts which were made to assess the appropriate amount of damages assuming that the defendants are liable only for part of the period of the plaintiff's detention, or for separate torts instead of a joint tort, because all the attempts were based on a process of splitting up or cutting down a figure which had been arrived at on what I consider to be an entirely inadmissible estimate of the defendants' responsibility. In order to explain why I differ from the learned Judge on the question of remoteness of damage, it is necessary to refer to the Lunacy Acts of 1890 and 1891, and to the scheme of the legislation contained in those statutes. In dealing with the Lunatic Asylums Act, 1853, that wise and learned Judge the late Lord Lindley, in *Regina v. Whitfield* (15 Q.B.D., 122, at p. 150), speaks of that statute as one which had given justices of the peace and medical men large powers, and said that the statute was based upon the theory that they could be trusted; that statement is, in my opinion, equally true of the Lunacy Acts of 1890 and 1891. In an examination of the provisions of those statutes, as applicable to the present case, one can start with the reception order dated November 10, 1912. That order authorized Dr. Adam to receive and detain the plaintiff in his registered house at Malling. The order does not in terms refer to any detention, but the whole scheme of the statute, and in particular the provisions of section 35, indicate that a reception order, if it satisfies the requirements of the statute, is of itself a sufficient justification for the detention of the person named in it, and if the person escapes, he may, under section 85 of the Act of 1890, without any fresh order and certificate or certificates be retaken at any time within 14 days after his escape by the manager of the institution for lunatics in which he was detained, or by anyone authorized in writing by the manager.

By section 7 of the Act of 1891, a reception order remains in force in the first instance for a year, and thereafter for two years, and thereafter for three years, and after that for five years, provided that not more than one month, nor less than seven days, before the expiration of the period at the end of which the order would expire a special report of the medical officer of the institution as to the mental and

bodily condition of the patient, with a certificate under his hand certifying that the patient is still of unsound mind and a proper person to be detained under care and treatment, is sent to the Commissioners. In framing any provisions for dealing with persons of unsound mind, or with persons alleged to be of unsound mind, the Legislature is faced with a difficult and a delicate task. To borrow Lord Denman's language in the case of *In re Shuttleworth* (9 Q.B. 657, at p. 658), the double protection has to be afforded against improper confinement on the one hand, and against danger from a lunatic's being unrestrained on the other.

Legislative Safeguards.

Some of the safeguards provided by the present legislation consist of the provisions contained in Parts VI and VII of the Act of 1890 for periodical visits by specially appointed persons, whether Commissioners, Visitors, or members of visiting committees, and in the powers given to such persons under sections 75, 77 and 78 of the statute to make orders for the discharge of patients, and in the provisions contained in section 83, for the steps which the manager of a hospital or licensed house has to take for the release of a patient who has recovered; these and many other provisions could be referred to as indications of the truth of Lord Lindley's statement that the whole scheme of the legislature is based upon the trust which it has placed in the medical men and in the specially appointed officials whose duty it is to carry out the provisions of the law. I approach the consideration of the Lunacy Acts from an entirely different point of view from that taken by the learned Judge. He considers that deliberate decision by a responsible person directly affecting the liberty of the subject may, for the purpose of considering whether it constitutes a *novus actus interveniens*, be treated as mere machinery which can be ignored. I cannot so regard any certificate given under section 38 of the Act of 1890. I go further, as I consider that the Act casts upon every medical man in whose care a patient is placed under the Lunacy Acts a daily and hourly duty of being satisfied, and of taking the necessary steps to satisfy himself, that the patient's condition is such as not only to justify, but to require confinement. I look on every decision deliberately come to in the exercise of that duty, whether by a medical man, by a Commissioner, by a Visitor, or by a member of a visiting committee, as of itself amounting to a *novus actus interveniens*. In the present case it is not suggested that the persons whose duty it was to form opinions on the plaintiff's mental condition did not form them. Such of the case-books produced contain numbers of decisions deliberately formed and duly recorded. The complaint is not that they did not form the opinions, but that the opinions were wrong; for the present purpose this is not a material consideration. I am unable also to accept the view of the learned Judge that because the persons whose duty it was to come to decisions on the plaintiff's mental condition omitted to diagnose his case correctly, their actions can be treated as acts of omission, and therefore ignored.

Here, again, so much depends on the point of view from which you regard the Act. A medical man who diagnoses a case of measles as a case of scarlet fever may be said to have omitted to make a correct diagnosis; he may equally well be said to have made an incorrect diagnosis. In my opinion, the decisions come to over this long period of years by all the persons whose duty it was to come to a decision on the plaintiff's mental condition, even assuming they were incorrect and in one sense omissions, are yet quite clearly also acts of commission, each of which operates as a *novus actus interveniens*, breaking the chain of causation between the acts of the defendants which are complained of, and the subsequent detention of the plaintiff.

I need not refer in detail to the occasions on which the chain must, in my opinion, have been broken. They must have been of almost daily occurrence; I may, perhaps, note some of the more important. There were three occasions when certificates were given under section 38; there were special visits of Sir James Crichton-Browne on more than one occasion; visits were paid by a Commissioner or a Lord Chancellor's Visitor in June and July, 1913, August, 1916, May, August, and October, 1917, February and April, 1918, March, April and October, 1920, and February and June, 1921; there may have been others which I have not noticed.

It is not necessary to go further back than the recent case of *Weld-Blundell v. Stephens* (36 *The Times* L.R., 640; [1920] A.C., 956), and to the speeches of Lords

Dunedin and Sumner in that case, for an authoritative statement of the law applicable to this part of this case. To adopt Lord Dunedin's language, the question for decision is whether the damage complained of by the plaintiff was the natural consequence of the alleged wrongful acts of the defendants, or whether it was the result of some *novus actus interveniens*. Lord Sumner prefers the description "direct" to "natural," as applied to consequence. Both learned Lords apply a test whether the damage complained of in that case was either natural or direct, which test, though differing in form, is the same in substance. Lord Dunedin says: "It was the repetition of the words by Hurst to Lowe and Comins, which was the voluntary act of a free agent, over whom the defendant had no control, and for whose acts he is not answerable, that was the immediate cause of the plaintiff's damage." Lord Sumner says: "In general (apart from special contracts and relations and the maxim *respondeat superior*), even though A. is in fault, he is not responsible for injury to C. which B., a stranger to him, deliberately chooses to do. Though A. may have given the occasion for B.'s mischievous activity, B. then becomes a new and independent cause." Applying these tests to the present case, my opinion is that directly the plaintiff passed out of the care of Dr. Adam into the care of others whose statutory duty it was to form, and who did form, independent opinions as to the plaintiff's state of mind, then, if the plaintiff continued to be detained as a result of those opinions, the defendant cannot be held responsible for such detention. That the continued detention of the plaintiff was the result of those opinions cannot, I think, be disputed. Whatever the view of the court may be upon the other points in the appeal, the view which I have just expressed would render a new trial in the case of both defendants necessary.

The Case of Dr. Adam.

The case of Dr. Adam, however, demands separate inquiry; the question in his case is whether he has been guilty of any actionable wrong, and that question depends on a consideration of the plaintiff's position under the Lunacy Acts while he was on leave of absence and on Dr. Adam's rights, arising out of the reception order, of compelling the plaintiff to return, and on the question whether Dr. Adam is entitled to the protection of section 330 of the Act of 1890. The two questions are quite distinct, and must be dealt with separately. The argument for the plaintiff seems to treat the leave of absence order as a grant of complete liberty for the full period of 28 days. In my opinion it is nothing of the kind; it is nothing more than an intimation by the medical officer to the patient, sanctioned by two of the Visitors, and consented to by the person on whose petition the reception order was made, that he, the medical officer, will not, during the period named in the order, put in force the powers conferred upon him by the reception order unless in the exercise of his discretion he considers it necessary to do so.

What are those powers? They include the power of physical restraint so long as the patient is in a place where he can be controlled by the medical officer, or by those whom he appoints to represent him. If the patient is absent on leave of absence and is required by the medical officer to return and he refuses, he becomes, in my opinion, an escaped person, and liable to be retaken under section 85 of the Act, just as much as if he had run away from an attendant while out on a walk with him. The case of the patient who outstays his leave of absence, and does not send a medical certificate, is specially dealt with in subsection 8 of section 55. He can be retaken as an escaped person, even though he had not been ordered or requested to return. If, therefore, Dr. Adam had telephoned to the plaintiff instead of to Dr. Bond, and had ordered him to return and the plaintiff had refused to do so, Dr. Adam would have been justified in treating the plaintiff as an escaped person, and in sending for him as he did, provided the attendants were properly authorized in writing. It was not, however, necessary to treat the case as one of an escape.

The form of the absence order merely suspends the medical officer's power under the reception order until such time as he considers it necessary to "take back" the patient. From this point of view the patient is not an escaped person who requires to be retaken. The taking back is merely the putting into operation of the suspended powers under the reception order. I cannot accept a construction of the order which substitutes "receive" back for "take" back, as no authority was needed to receive the patient so long as the reception order was in force; nor can I adopt the construction of the statute contended for by the plaintiff's

counsel, that the proper procedure in the circumstances, if Dr. Bond considered the plaintiff unfit to be at large, was to treat him as a lunatic wandering at large under section 15 of the Act of 1890. Apart from the fact that this section comes in the part of the Act dealing with cases where there is no reception order in existence, and, therefore, has no application to this case, I should hesitate long before accepting a construction of the statute which required the arrest by a constable as a necessary step to terminate a patient's leave of absence, for these reasons: I think that Dr. Adam was entitled to terminate the plaintiff's leave of absence, and to do it in the way in which it was done.

The second contention made on Dr. Adam's behalf was that in any event he is entitled to the protection of section 330 on the ground that in what he did he acted in good faith and with reasonable care. The jury found in Dr. Adam's favour that when he received the telephone message on December 14 and sent the car he honestly believed that the plaintiff was of unsound mind and unfit to be at large, and that it was in his interest that he should be taken back to Malling Place, but they found that Dr. Adam did not take reasonable care in acting as he did.

A considerable amount of argument was directed to the question of the onus of proof, and whether it rested upon the defendants to prove that reasonable care was used, or on the plaintiff to prove the absence of it. In the present case it does not seem necessary to decide that point, because if the onus was on the defendants Dr. Adam discharged it; if it was on the plaintiff, I consider that there was no evidence to support the finding of the jury. The only suggestion of want of care is that Dr. Adam did not go himself in the motor-car instead of sending two attendants. If the question had to be looked at from the point of view of the plaintiff's position, it seems curious that the suggestion should have been made. The plaintiff's case was that he was a sane man, and that Dr. Adam was a person who was incapable of forming an accurate judgment on his mental condition; why, then, should it be considered necessary that Dr. Adam should himself have gone to take back the plaintiff?

The question, however, must be considered from the point of view of Dr. Adam's position. What was that? The plaintiff was no stranger to him; the message he received was not one indicating that any doubt existed which needed clearing up; the message was received from a source which was certainly authoritative; Dr. Adam believed it. I cannot see that prudence or consideration for the patient required anything except what Dr. Adam did—namely, taking the necessary steps to secure the plaintiff's return as speedily as possible. A great deal was made of Dr. Adam's statement that he could have gone himself but for the fact that it was the day on which his partner would naturally be off duty in the afternoon. The test of what amounts to reasonable care in a particular case is not necessarily what a person would do in ordinary circumstances; the circumstances in the present case were exceptional. In the particular circumstances of this case I cannot see any evidence of want of care on Dr. Adam's part, and I think that the importance attached to the fact that he did not go himself to fetch the plaintiff is only one of many instances in which, during the trial, comparatively unimportant incidents received more consideration than they really deserved.

In my opinion judgment should have been entered for Dr. Adam, and the appeal in his case will, therefore, be allowed, and the judgment for the plaintiff will be set aside and entered for this defendant, with the costs of the action and of the appeal.

The Case of Dr. Bond.

The case of the defendant Dr. Bond stands on an entirely different footing. The Attorney-General, appearing for him, admits that, however well-intentioned he may have been, he had no legal justification for his action. The verdict and judgment entered cannot be allowed to stand, as, apart from any other considerations, the damages awarded have been assessed on a wrong basis, as I have already pointed out. As a new trial must be had on this ground, I say nothing on the other points of which complaint is made. The damages on the new trial must be confined to damages for an imprisonment up to, but not beyond, the time when Dr. Adam had the opportunity, and exercised it, of forming an independent judgment on the plaintiff's mental condition and whether it was necessary to continue to detain him under the reception order.

In the case of Dr. Bond the order of the Court is that the verdict and judgment are set aside and a new trial ordered, Dr. Bond to have the costs of the appeal.

As the costs of the first trial were greatly increased by the form and extent of the plaintiff's claim against Dr. Bond, we think there should be a special order as to the costs of the first trial; those costs will abide the result of the new trial, but in the event of the plaintiff's succeeding on the new trial the costs of the first trial must be confined to such costs as the Taxing Master considers reasonable had the first trial been confined to an action against Dr. Bond alone, and to damages in respect of a period which terminated on Dr. Adam deciding after the plaintiff's return to Malling Place that he should continue to be detained under the reception order. The plaintiff must repay and replace the moneys paid to him under the order of the Judge. The order for a new trial is conditional on this repayment. If payment is not made within one month there will be liberty to apply.

Lord Justice Warrington read a judgment to the same effect.

Lord Justice Scrutton, in a concurring judgment, said that the case had naturally and deservedly attracted much public attention. Indeed, it had attracted so much attention that there was a danger of the real issues in dispute being confused. It was not an inquiry into the whole working of the Lunacy Laws with regard to the plaintiff, with a power to the tribunal to award him compensation for any injuries which he had suffered from the operation of those laws. It was not a Royal Commission to consider in what respects the Lunacy Laws should be amended to avoid the occurrence in future of any errors which had been made in Mr. Harnett's case. It was the trial of a complaint that two named persons over 11 years ago, between December 14, 1912, and February 22, 1913, committed, either in combination or independently, specified wrongful acts for the direct consequences of which, if they were found to have acted wrongfully, those two persons must pay damages. If the inquiry were one into the whole working of the Lunacy Laws as to Mr. Harnett, there was considerable ground for thinking that he had been detained as a lunatic for much longer than he ought to have been. If it were a Royal Commission, this case showed that serious consideration should be given to the question whether the judicial inquiry preceding the making of a reception order should be more precise in its procedure by informing the alleged lunatic of the nature of the charges against him and hearing his defence.

Another question also requires much thought: Whether the existing system of constant visiting and reports afforded sufficient safeguards against undue prolongation of detention. When these questions were considered, it might be difficult to provide any more practical safeguards than were at present provided, and they must certainly be approached from the point of view of protection of the community as well as that of liberty of the individual. In the present case the results were sufficiently startling to call for a careful consideration of the legal questions involved.

His Lordship, having dealt at length with the questions raised in the case, concluded: I think the earnest—almost overwhelming—desire of Judge and jury to make proper compensation to the plaintiff for wrongs which they think, probably rightly, he has suffered has prevented them from giving sufficient consideration to their equally strong obligation to do justice to the particular defendants whom the plaintiff is seeking to make liable and who are not necessarily the persons responsible for every, or any, wrong the plaintiff has suffered.

Solicitors: The Solicitor to the Ministry of Health; Messrs. Le Brasseur and Oakley; Messrs. Rooper and Whately; Mr. Harry Coulson; Mr. W. R. Hempson. —[Abstract from *The Times*' Report, May 17, 1924.]

Belgium, like other countries, has found difficulty in deciding on the proper manner of dealing with mentally abnormal persons who commit crimes. The present Belgian law enacts "qu'il n'y a pas d'infraction, lorsque l'accusé ou le prévenu était en état de démence au moment du fait." Up to the present time it would appear that only cases of definite psychosis (la démence complète) have been recognized as coming within the scope of this law. But it is now felt that there are other, and equally important mental abnormalities, which often lead to the commission of offences.

And a proposed new statute (ably explained in an accompanying memorandum), which would include all kinds of mental abnormality, is now under consideration. Those who drafted this law have, most wisely, refrained from attempting to give precise definitions of the mental conditions with which it would deal, simply describing them as "les déments, les insuffisants mentaux et les déséquilibrés." The terms are wide, but are not wider than may be safely dealt with by a competent court, assisted by proper expert medical advisers. But the memorandum points out that the recognition of many of these mental conditions involves a medical problem of extreme difficulty. And the new law provides that when there is reason to suspect the existence of any of these conditions in an accused person, or when the existence of such a condition is put forward as a defence, the court shall have power to remit the accused person for observation to "une annexe psychiatrique" attached to a prison, which annexe will be, we may presume, adequately staffed. The period of such remand, as we should call it, will be for a term of three months, which term may be extended if the psychological examination has not been completed. This period seems lengthy to us, although it would not be too long for the due estimation of many cases. But the preliminary proceedings in a Belgian criminal case are much more prolonged, and are, in other respects, very dissimilar to those in force in this country. If the court decides, upon the psychological report presented to it, that such a condition of mind exists, it may order the accused (assuming that his material guilt of the offence has been proved) to be detained in a special establishment provided by the government for such cases, thus obviating their commixture with non-criminal defectives. And a sentence of detention in such an establishment would be obligatory on the court when the accused person had been found guilty, on some previous occasion, of a grave offence. At an assize court the jury will be asked to say (1) whether the accused has committed the crime with which he is charged, and (2) whether the accused is suffering from one of the mental conditions already mentioned. There is provision for an appeal, on the part of the accused, against such a sentence of detention, and in the case of such an appeal the "dossier" of the accused would be placed for forty-eight hours at the service of his counsel. It would also be open to the accused person to be examined by a physician of his own choice. It is not easy to see how the liberty of the individual subject could be better guarded. It is explained that the object of the law is not vengeance, but the due and humane defence of society—an object which is, at present, not adequately attained.

The explanatory memorandum fully recognizes that indeterminate detention of such cases is the really logical measure. But it has been felt that Belgian public opinion, like ours, is not yet ready for the adoption of that course. And it is provided that the detention shall be for a term of five, ten, or fifteen years, the length depending upon the gravity of the offence which has been committed. Power is given to a commission, composed of a judge, a member of the provincial council, and the chief physician of the psychiatric annexe, to decide whether any detained person is fit for earlier release on the ground that he is no longer a danger to the public. This commission would have power to call in the aid of an extern physician, should it deem that course to be desirable.

The proposed new law also contains provisions for the better treatment of habitual offenders and of young offenders.

THE report of a very curious case has reached us from South Africa. A man named Chigango was the "chief" of a very isolated district in Rhodesia. The natives in this district had suffered severely from a prolonged drought. It was felt that this drought was due to some offence which had been committed against the "rain goddess"—a local divinity who was incarnated in the person of a woman. Various measures of propitiation were tried, but without success. Finally it was decided that a human sacrifice was required. Manduza, Chigango's son, was selected as the victim. The idea that a criminal is one who has incurred the wrath of the tribal god, which wrath is supposed to fall upon the tribe, is a very ancient view, and was reflected, until comparatively recent times, in the terms of our criminal indictments. The report does not make it clear whether Manduza was selected as representing the tribe, or whether it was felt that he had personally committed the offence against the goddess. There was evidence during the trial that having sexual relations with the goddess was regarded as a very heinous crime. However this may have been, Manduza was sacrificed by being burnt to death with the ceremonies appropriate to such a case. It is a curious coincidence that rain fell almost immediately after the execution. This doubtless confirmed the natives in their belief as to the efficacy of their sacrifice.

The British Government then appears to have heard of the occurrence. Chigango and six others were arrested and put on their trial for murder. One was acquitted, and the others were found guilty and sentenced to death. The death penalty was not, however, inflicted. And the sentences were commuted to terms

of imprisonment, varying in length from three years to ten years in the case of Chigango.

It is obvious that the case raises very interesting questions. It was admitted during the trial that native religion and custom had necessarily to bow to the supremacy of British law. The natives were informed of new statutes. But no systematic attempt was made to instruct them in common law, or to inform them how far their customs were illegal. The judge, indeed, remarked at the trial that the natives usually learnt what British laws were only when they had broken one of them. Bibles were circulated among the natives. And it was mentioned, as a curious fact, that these Bibles contained a picture of Abraham about to sacrifice Isaac in obedience to Divine command.

A civilized government is not only justified in preventing, but is bound to prevent human sacrifices from being carried out in its territory. But it must be remembered that many local customs exist which run counter to British ideas of law and of morality. We may instance polygamy, which is permitted, so far as natives are concerned, in large parts of the British Empire.

It may be urged that ideas such as we have described concerning the rain goddess should be regarded as coming within the boundary of insane delusions. Such was, in fact, the line of defence taken by counsel for certain of the prisoners. It might be possible to obtain a verdict of "Guilty but Insane" in the case of a man in this country who claimed to have killed his son by Divine command. There are, in fact, cases in which such a verdict has been obtained. But it is difficult to regard a man as insane for holding and acting upon the beliefs of his nation, which beliefs he has been brought up to receive.

Chigango himself was defended on the grounds of his conscientious motives. It was urged that he had no other motive for the sacrifice of his son than that of the desire to do what was best for his tribe according to his religious beliefs. We are bound to prevent such beliefs from being carried to their logical conclusions. But it becomes us to walk humbly in this matter, and not to exalt ourselves unduly as compared with those whom we often stigmatize as ignorant savages. It is not so very long since we dealt with witches in a way not far removed from the murder of Manduza in this case. And, even now, it is not easy to justify some of our penal methods (for example our treatment of those who attempt suicide) on other than "religious" grounds.

REX v. HERBERT CLIFFORD GOSNELL.

This case was tried at the Central Criminal Court on March 27, before Judge Atherley-Jones, K.C. The defendant was a solicitor,

æt. 67. He was indicted for publishing an obscene libel in the form of a letter addressed to a young girl.

The defendant pleaded "Guilty." And, on his behalf, counsel placed certain facts before the Court. In January of this year the defendant underwent medical treatment, during which he had to take, eight times a day, a preparation containing some aphrodisiac drug. Without urging that the defendant was insane in the legal sense, counsel submitted that this was a case in which the offence was clearly due to mental abnormality. Dr. Stoddart was of opinion that the defendant should go into a nursing home for an operation.

Dr. Stoddart said that he had found a certain amount of arterial disease of the brain in the defendant, as also some affection of the nervous system.

Evidence was given as to the very high moral character hitherto borne by the defendant.

Judge Atherley-Jones said that he would not attempt to define, nor did he know, what insanity was; but it did not matter, on the facts, whether the mental state in this case was called insanity or not. He considered the defendant to be worthy of commiseration, and he bound him over in his own recognizances, and in those of his brother.

This is the second occasion, within recent date, that we have had the opportunity of commenting upon the very enlightened attitude adopted by this particular judge. All who have experience of these most sad cases of sexual offences committed by elderly men of hitherto respectable life will agree that the view which the judge took was entirely correct, and that the case was one for treatment rather than for punishment. The *McNaughten dicta* would have left no loop-hole in this case, although it might, perhaps, be brought within the limits of the suggested new rule as to "irresistible impulse." We can only hope that Judge Atherley-Jones' example will be followed by other legal authorities, and that the necessary corollary of the provision of treatment for those cases who cannot afford it for themselves will also be adopted.

Part II.—Reviews.

Poine: A Study in Ancient Greek Blood Vengeance. By HUBERT J. TRESTON, M.A. Longmans, Green & Co., 1923. Crown 8vo. Pp. ix + 427. Price 21s.

In the historic development of the rules governing punishment of homicide in Greece, and in the modern theories upon the subject,

Prof. Treston has found material for a most interesting exposition—interesting, though involved; and so far interesting as to give a certain zest to occasions of dissent.

(1) In Homeric society, according to our author, the well-known principle of Wergeld payment gave shape to the law of homicide as recognized among the Pelasgians; but the dominating military aristocracy of the Achæans, subsisting side by side with Pelasgian tribal organization, had lost its own primitive Wergeld system, had acquired no substitute, and was apparently practising a more or less unregulated private vengeance. The arguments for the loss of this system do not convince us. Upon lack of evidence of the presence of a Wergeld system we should hesitate to draw the conclusion of its absence. The author, following Ridgeway in believing the Achæans to be Celts, conceives them as naturally having lost their Wergeld system in the midst of their wanderings and fightings; but when by way of a standard example of Wergeld system he himself looks to the Welsh, we are reminded forcibly enough that such loss did *not* invariably occur to Celts who had wandered and fought (nor did it occur, by the way, to the migratory Anglo-Saxons, to whom our author at times refers).

(2) In the succeeding Hesiodic period, private vengeance, knowing no bounds, resulted in anarchy. Professor Treston ascribes this retrogression to the invasions, and seems to infer an abrogation of a pre-existing law. But the effect might surely be produced, even in a primitive community, by dislocation of the legal machinery.

(3) At this stage of social development we become concerned with the idea of *pollution* by murder. Primarily a religious conception, subsequently it became the principle of a more specifically criminal law, administered by a theocratic nobility. Without alteration of its substance, the law thus crystallizing was codified by Draco, and accepted by Solon, the *personnel* of the Courts meantime undergoing but slight modification.

We have now, by implication, touched on the three well-known aspects of murder (and of other grave offences)—tort, sin, and crime—corresponding to three stages of legal development. The idea of tort underlies the Wergeld payment, as compensation for injury inflicted; the idea of pollution is the recognition of the element of sin; the idea of criminality is characteristic of a more modern view of offences. Now while these ideas are in no way mutually exclusive (and, in fact, are found co-existent in our own country to-day), the author, in his argument, seems to assume some "struggle" between the idea of pollution and the idea underlying the Wergeld. Hence he finds difficulty in admitting the possibility of any suggestion of compensation, once the Wergeld has ceased to be the sole sanction in cases of murder. In forming his conclusions, however, he admits that the idea of pollution and the Wergeld co-existed, as, in fact, they did amongst the Saxons. Argument and conclusion seem lacking in firm consistency.

(4) The principal departure from those lines of historic development which the student of jurisprudence would naturally expect, lies in the peculiar emphasis in Greece upon the religious element.

The treatment of the religious idea of pollution is, to our mind, the most dissatisfying feature of the work. Professor Treston, if we understand him, makes the idea appear in full development at the end of the Hesiodic period. The suggestion of its importation from the east, even if it rested on mere cogent evidence, would not solve the real problem here involved. The Hebrew conception of the land's being polluted by offence (if, indeed, the land must be understood literally and not by metonymy for persons) does not square with our remembrance of the conception of pollution set forth by the tragedians of Greece—a recollection supported by many of the quotations in this work. We conceive that, according to the Greek tragedies, the kinsman of the slain one regarded pollution as a personal, not a racial or territorial affair. The existence of the *γραφὴ αἰσβίας* points in the same direction.

(5) We feel there is room for a broader and more comprehensive interpretation of the phenomena of the Hesiodic period than is supplied by the author's theory, which makes the Achæans a decadent race, and views this period as an occasion of their relapse into a barbarism from which other Greeks were rescued as by a miracle. Let us seek to reconstruct the situation psychologically. In the place of crude vengeance, Wergeld substituted compensation, but did not, we think, express any real idea of retribution or of punishment. Assuming Professor Treston's account of the condition of the Homeric Achæans to be correct, does it not seem probable that there was among them some vague feeling that human life was too sacred for its extinction to be balanced by a mere money payment? Such a feeling might ally itself in some minds with the old lust for vengeance, while yet spreading itself abroad in the community through its appeal to individual consciences. "Righteous anger" would induce individual action—the independently originaive action of the man who is contemptuous of the conventional morality on which law is based. Thus a religious idea which appealed to individual judgment, and stimulated individual action, might release anarchic energies.

Such energies, however, through their very religious origin, were infused with a latent element of submission, and were presently to be broken to harness. It is even possible that Apollo himself, like other gods of polytheism, was but an embodiment of deep passions which later he came to control. If pollution was at one time a matter between the individual and his god, independent of the state, it did not remain independent of all authority. As the god became more closely associated with certain places, and the fame of particular shrines increased through the skilful responses with which they met suppliant inquirers, the priests enlarged their function; and from supplying the individual with interpretations of the god's will in the more difficult cases, they would go on to take over from him the interpretation of the god's will in the simpler.

Thus, rules would be evolved for the purpose of defining the scope of cases in which the god was offended, and to restrain, under the sanction of pollution and excommunication (as possibly in the case of Neoptolemus), attempts to present the god as an accomplice,

through his behest, in retaliatory murder. These conditions would naturally lead to the establishment of priestly courts for the trial of homicide.

(6) The account of these courts is detailed, and seems well founded. It does not, however, so define the relations of the different courts as to make clear what would happen if, for example, the Areopagus considered a case outside its jurisdiction as being one of involuntary homicide, while the Palladium rejected it as being one of voluntary homicide. Would a man escape who, on either view, was liable to some punishment? Such an *impasse* might easily develop, unless the different courts were in some organized relation of concurrent or appellate jurisdiction—linking the Palladium, and possibly the Delphinium, with the Areopagus as co-ordinate or superior court. Professor Treston might perhaps dismiss the difficulty, in the spirit of his introduction, by saying that though such conditions of mis-carriage might subsist in mediæval or modern justice, by the broad common sense of primitive law they would be avoided. We could only answer that this original view is in direct conflict with every well-known feature of the history of legal institutions. That history exhibits a constant process of the shedding of formalisms—the infant swaddling-bands of the earliest courts.

The technicality and unreasonableness of these ancient tribunals has often seemed to us to stultify conclusions reached on the innocent method of reconstructing ancient law by the expansion of scattered fragments into patterns of visionary reasonableness. The more exiguous the data, the more favourably the reconstructed code compares with modern, or any actual law, and the more flattering, it may be presumed, is its portrayal of the original from which the fragments come.

(7) In considering later Greece, we are inclined to doubt our author's use of Plato's *Laws* and of the tragedies. No one, surely, can so refract the visions of Plato's uplifted eyes as to bend them to the pedestrian uses of a text-book of law, without ignoring the reach of the Platonic aim, and blinding himself to its richer intellectual promptings and significance. Similarly, to look upon the tragedians as if they were no more than able interpreters of the spiritual atmosphere of their time, is to reduce the impulse of imaginative genius to a sensitive form of journalism. If Æschylus, Sophocles and Euripides so selected and adapted material from the mass of Homeric and other legends as to frame a vehicle old, yet new, for their own rapt, ideal teaching to their own day, it by no means follows that they chipped the result into consistency with their own actual political and legal environment.

W. G. H. C.

Social Control of the Feeble-minded. By STANLEY P. DAVIES, Ph.D.
The National Committee for Mental Hygiene. New York City.
8vo. Pp. x + 222. Price \$1.25.

This volume aims at the presentation of the concepts held from time to time regarding mental deficiency and the stages of the development of social control of this problem. It may at once be

stated that the author deserves congratulations on the success with which he has carried out this task, in a form suited alike for the professed psychiatrist, for the member of a mental hospital committee, or for the general reader.

He commences by a discussion of the various proposed definitions of the term feeble-minded, inclining in the end to combine both social and psychological terms: "a satisfactory definition would indicate an intelligence quotient below a certain level," as a measure of general intelligence, "plus a certain deficiency in other personality traits leading to social inefficiency." The use of the intelligence quotient alone, though it sorts out the defective, truly enough, also segregates out large numbers of normal individuals; while the social test alone is rather too vague, and may entangle in its meshes those whose failure is due to inhibitions arising from contact with the outer world.

He proceeds by the historical method, distinguishing four periods in the evolution of the social reaction to the problem. In the ancient and medieval period, down to the beginning of the nineteenth century, the mentally defective were treated kindly or cruelly in accordance with the current ecclesiastic views of the causation of the condition—whether they were "*les enfants du bon Dieu*," or, as was held by Luther and Calvin, were "filled with Satan."

With the discovery of the "wild boy of Aveyron" in 1798, and the attempts at his education made by Itard, commences the period of physiological education, the methods of Seguin, Itard's pupil, still holding the field, especially as re-introduced by Madame Montessori. During this period institutions for the feeble-minded were established in most parts of America and Western Europe.

At first it was believed that all the mentally defective could be educated to fill a useful niche in the world, while many hoped for a complete recovery in the slighter cases. It is to this aspiration that we owe the Elementary Education (Defective and Epileptic Children) Act, which provided special schools and extended the period of compulsory education for the scholars therein until the age of sixteen years. Gradually, however, each institution and school found that the lower-grade pupils were unfit to leave at sixteen, so that there was an increasing demand for custodial care after the school age. This introduced an alarmist period, when the emphasis on eugenics and the application of the standardized methods of intelligence testing awakened public attention to the magnitude of the problem of mental deficiency. The students of heredity, basing their studies on cases brought to notice in institutions, concluded that mental deficiency behaved as if due to a single unit character inherited along Mendelian lines, so that while the offspring of other matings would show a proportionate frequency of defect, all the offspring of a pair of mentally defective parents would be themselves defective. In this fear they urged wholesale segregation, to be supplemented where necessary by measures for sterilization. Laws to give effect to this proposal for sterilization were passed by fifteen States of the Union, but as there was no strong public opinion

behind the movement, the man in the street being just a little suspicious of the prophetic powers of the expert in heredity, actually only 403 operations have been performed in the whole of the fifteen States during the period of fourteen years. This measure of eugenic control is tending to fall into disuse, and, as the author is careful to point out, such a rapid solution of an urgent problem was not advocated by those of the medical profession who were best informed on the matter. Various commissions set to work to ascertain the provision required for segregation; that for New York State, for example, pointed out that whereas there was provision for 3,000 defectives, they had learned of the existence of 21,000 others not in institutions. At the same time the various revisions of the Binet-Simon tests had been vigorously applied in schools and institutions, and the definite assertion was made that all who test below 70 I.Q. should be considered feeble-minded, while some indeed extended this to a lower limit of normality of 75 I.Q. This means that all over sixteen who failed to pass tests for the age of 12 were feeble-minded. This definition was largely used in the selection of children for special schools, for which purpose it has indeed some value, but many protested against its general application in the case of adults, since although tests may measure general intelligence, this latter is not the same as wisdom, nor the sole factor in determining conduct. With the war came the trial of the "American Army Tests" on the draft, with the result that *if* the mental testers' definition was to be held good, almost half the draft would have been deemed feeble-minded. This absurdity led to a drastic reconsideration and the withdrawal from a position that had never been generally accepted in this country.

The modern period since 1918 has seen the development of extra-institutional methods of care, training and supervision of the defective. Recent work on heredity has shown that mental deficiency cannot be regarded as a unit character, so that the frequency of its transmission, regarded merely as a statistical question, would be lessened—a conclusion more in agreement with actual facts than the previously held views. It was found that many of the families investigated, and on which the conclusions had been based, were really extreme cases, and that mental deficiency was more often a result of illness or accident in the lifetime of the individual. Also the extreme views that nearly all prisoners, prostitutes and the like were defective have given way to smaller estimates—10 *per cent.* or even less—and it has been realized that the cause of delinquency is usually to be sought in the environment. The experiments in licensing out on trial from such institutions as Waverly and Rome indicated how large a number of the trained inmates could make good in the world, provided they were well placed and adequately supervised. The idea that all defectives married or had illegitimate children was found not to accord with facts, while it was evident that the enormous expense of general segregation was neither popular nor justified. This American experience is fully supported by such data as have been collected during the period of operation of the Mental Deficiency Act in Britain, where most of the defectives

have perforce had to be dealt with by means of school education and supervision only, under which the majority are capable of absorbing and of living up to ideals.

The conclusion of the author is that the majority of the feeble-minded may safely be retained as functioning members of society, *provided* the group exercises over them a sufficient degree of social self-control to give them the training suited to their capacities, and continues to furnish throughout their lives the sort of leadership which will foster in them the highest social ideals. The way this task has been approached by the authorities of the leading institutions in the United States forms the subject of interesting chapters on social reconstruction, which should be read by all who have such a task before them. It is not enough to test a person to know that he will grade as mentally defective; his whole personality must be the subject of inquiry, the right subject to awaken interest must be found, and various methods tried to exchange faulty for desirable forms of reaction. The method is not haphazard, albeit it must necessarily proceed by methods of trial and error. Although it is impossible to supply a missing intellect, it is often possible to socialize the personality; though the smaller number whose anti-social reactions are confirmed will always need permanent care. The most successful schemes seem to include school, followed by a period at a colony, and gradual reintroduction to the world through some system of boarding-out as a worker or life in a hostel. This latter method fortunately seems likely to take root in this country, where such provision has so far been sadly neglected.

The methods expounded by the author cover the chief experiments of which the results are so far available, and if the ideal method has not yet been found, they point the way to the best and most economical use of our available resources, with a minimum of interference with the liberty of the subject or the self-respect of the community.

F. S.

Health and Conduct. By ARTHUR J. BROCK, M.D. Edin. With an Introduction by Prof. PATRICK GEDDES. London: Williams & Norgate, Ltd., 1923. Demy 8vo. Pp. xxiii + 295. Price 10s. 6d. net.

This book is offered as a doctor's contribution to sociology; and certainly the medical man, whose profession brings him into contact with all kinds of people and provides him with an intimate knowledge of the conditions under which they live, should be peculiarly fitted to contribute studies of value to social science. Dr. Brock is a disciple of Comte, the founder of sociology in its modern sense, whose teachings have recently borne fruit in the work of Geddes and others on Regionalism and Civics. For Dr. Brock, as for Comte, sociology is not a matter of statistics, blue books and economics; rather is a living science—the science of human life. If society is regarded as a living organism, it is natural for the doctor to develop the thesis that its present disturbed state is the expression of a social disease, the causation, diagnosis, prognosis and treatment of

which may be elucidated and ameliorated by methods similar to those applied to diseases of the individual. This, briefly, is the line of thought pursued by the author, the idea of his book being based upon the parallels between human diseases and diseases of the body politic.

Taking the view that the origin of our present discontents is mainly a mental condition—a psycho-sociological upset comparable to “shell-shock”—the author, approaching the subject historically, proceeds to consider the stages by which society has reached its present state of “neurasthenia.” In successive chapters he describes the pre-war, war and post-war mentalities, and endeavours to show how the existing pathological state of society is related to, and has arisen out of, the conditions which preceded it. Dr. Brock is widely read, and not only does he base his views upon a critical survey of the tendencies of modern life and thought, but also upon an extensive knowledge of the history, development and decline of past civilizations. In developing his subject the author has many interesting things to say about political, psychological, medical and educational problems and movements. Possibly he endeavours to cover too much ground; he touches upon so many aspects, departments and phases of life, with abrupt transitions from one to another, that his arguments are sometimes obscured and fail to reach their conclusion so smoothly as we could wish. His analysis of the present state of social life is, however, interesting and suggestive, and obviously the outcome of much study and personal observation. How far the gospel of regionalism, the principles of which the author endeavours to explain in this book, would be effective in resolving the existing conflicts of social life it is difficult to say. Unfortunately it is always easier to diagnose a disease than to cure it, and no writer can be expected to do more than make a few helpful suggestions for the treatment of the maladies of social life, the causes of which are so complex. This much Dr. Brock has done; and his view that progress in the future must depend upon a wider conception of the duties of citizenship is undoubtedly true. Each individual has to learn from his youth upwards that he is not an independent unit, but a more or less insignificant factor in the sum of the individuals which make up the community in which he lives. This appears to be the spirit which Regionalism is intended to foster. At the conclusion of the book the author refers the reader to a number of books and pamphlets in which the principles of this new movement are dealt with more concretely than he is able to do in his own volume. H. DEVINE.

Sexuological Essays. By W. C. RIVERS, M.R.C.S., L.R.C.P., D.P.H. Leipzig: Curt Kabitzsch, 1924. Pp. vi + 168. Circulation limited to medical practitioners. May be obtained from the author, Worsboro Bridge, Barnsley, Yorks. Price 7s. 6d. post free.

The important subject of sexual abnormalities is but little understood, even by medical practitioners. This ignorance Dr. Rivers

desires to remedy. And in the first essay of this series, entitled "An Outline Map of the Subject," he gives a brief description of the content of the science of "sexuology" (if we must use the word). The account thus given is, of course, exceedingly short. But it may stimulate the reader to make acquaintance with the authoritative literature of the subject. The importance of the Freudian and other theories as to the unconscious mind is fully recognized. The essential difference between inversion and perversion is discussed. A brief bibliography might have been added with advantage. And it is not easy to see why, in a book intended solely for medical practitioners, it should be considered necessary to latinize the definition of certain forms of perversion, while giving the description of others in English.

The other essays are of a different character. A "New Theory of Kissing" is discussed. The essay on "Walt Whitman" is a continuation of a previous paper by the same author, and goes to show that the American poet was a sexual invert. The essays entitled "The Artist and the Savage" and "Miscegenation and Atavism" contain some ingenious speculation. And there is a chapter which maintains the somewhat novel thesis that fondness for cats is to be regarded as a male homosexual trait.

Dr. Rivers reminds us that the ignorance of sex abnormalities, and of their most varied types of expression, is a constant cause of failure on the part of lawyers to comprehend the true nature of the cases with which they have to deal. He quotes cases, *e.g.*, those connected with fetichism, in which the sex element has been entirely overlooked. Anything which will assist in removing this ignorance is to be welcomed. The words of W. K. Clifford, "It is all possible human knowledge which can be rightly used to guide human conduct," are appositely quoted. But Dr. Rivers, although he fully recognizes the enormous prejudice which exists on the subject of sex, appears to forget that this opposition can only be overcome by most tactful handling of the subject on the part of those who write on it. His essay on "Medical Women in the Future" is almost as ferocious as was the famous diatribe by Schopenhauer, and displays an anti-feminist attitude which will be strongly resented by many who might otherwise be disposed to support him. And the book is, in other parts, unfortunately aggressive. We may instance the statement, inserted without reference to any authority, that there is an excess of sexual perversion "amongst royalty, a privileged class largely immune from moral restraint."

On the question of the reaction of society towards inverts, Dr. Rivers takes a very reasonable line, pointing out that the fact of inversion being due to abnormality of disposition does not imply that the persons who suffer therefrom are to be allowed to express themselves in any way they may wish. To take any other attitude would involve allowing a similar liberty to exhibitionists, not to mention sadists.

All who are interested in the scientific study of sex problems will find themselves well repaid by a perusal of this little work. The book has been printed in Germany, and the custom of placing a

bracket after the figure which indicates reference to a footnote will be found most confusing by the English reader.

M. HAMBLIN SMITH.

Case Studies. Boston, U.S.A.: The Judge Baker Foundation, 1922. Price \$2.50.

In the rapidly growing science of the study of the criminal there is room for the text-book, the course of systematic lectures, and the detailed clinical study. Drs. William Healy and Augusta Bronner furnish us with an excellent series of the last. The work so ably begun by them at Chicago has been continued at Boston. They now publish a series of nineteen small pamphlets, each of which contains an account of the intensive study of one case (in one instance of a group of similar cases). The Judge Baker Foundation exists for the study of "problem" cases among adolescents. Its work is not exclusively concerned with cases coming to it from the law courts. There are many cases of delinquency which never come within the purview of a court; instances of stealing from members of the delinquent's own family are quite frequent. And there are adolescents who present problems which are not connected with legal wrong-doing. Even our limited experience in this country has shown that, given the necessary organization, parents, teachers and others are often most anxious to take advantage of it, and to bring their children's problems for solution.

The studies are most admirably presented. By a novel arrangement, the facts ascertained by the clinical study of the case, in all its aspects, are presented on one side of the page, while the conclusions arrived at are given on the opposite side. The reader may thus, if he is so inclined, form his own conclusions from the facts, and may then see to what extent the authors' conclusions agree with his. Indeed, for the purpose of class teaching, the pamphlets may be obtained in a form in which the conclusions are printed on separate sheets.

The studies are wonderfully detailed, and cover every possible aspect of the patient's life-history. But they are marked by a complete absence of theorizing, and by a "common sense" which should go far to commend them to magistrates and others who are inclined to pride themselves upon the possession of that very British quality, and to mistrust what they are disposed to regard as the nebulous sentimentality of professional workers in this new field. Often, indeed, professional assistance is considered to be quite unnecessary.

Although these studies are of the utmost scientific interest, and cannot be ignored by any student of this subject, it is by magistrates, lawyers and probation workers that we hope to see them read. It is this type of mind which most needs instruction as to what can be accomplished by these investigations. The intensive study of the individual offender is the only clue which will solve the problems of delinquency. It is merely working in the dark to apply any form of treatment, penal or other, until study on these

lines has been made. What is done in America can be done here. The workers can be found. It is only a question of expense. And such expense is really remunerative. As has been said before, uninvestigated offenders are the most expensive luxury in which any community can indulge. Further, clinical study does not commit a court, or other authority, to any particular form of treatment.

The methods which had been tried in the individual cases, before they were investigated scientifically, are criticized. And the after-history of the cases, so far as it could be ascertained, is also given. The authors quite candidly relate a few examples which proved to be failures. The importance of mental conflict as a causative factor in the production of delinquency is fully recognized, although actual psycho-analytic details are scanty.

M. HAMBLIN SMITH.

Constructive Conscious Control of the Individual. By F. MATTHIAS ALEXANDER. With an Introduction by Prof. JOHN DEWEY. Methuen & Co., Ltd., 1924. Cr. 8vo. Pp. xxxiii + 317. Price 10s. 6d. net.

It seems, according to the author, that the demand for this book has been an insistent one for some time past, and that the volume has been well appreciated in more than one quarter is shown by much that Prof. Dewey says in his introduction and by the eulogisms which are advertised on the paper cover. However, we think it is a pity that such over-estimated statements are made as—"Mr. Alexander has demonstrated a new scientific principle with respect to the control of human behaviour, as important as any principle which has ever been discovered in the domain of external nature." To say the work is epoch-making, as described by another disciple, is, too, of course, such an exaggerated valuation that we suspect that enthusiasm has here outrun reflective judgment. The author himself states that "the subject-matter of this book represents an endeavour to show that the great problems involved in the present condition of individual and national unrest demand for their solution a recognition, not only of their unity, but also of the unity of their underlying causes." He sees in the gradual lowering of the standard of sensory appreciation, of general co-ordination, and of the reliable use of the mechanisms of the organism, the great basic factors, and according to Prof. Dewey, he here promulgates a method for detecting the correlation between the physical and mental, and for creating a new sensory consciousness of new attitudes and habits. In his evolutionary development it is pointed out that man's fundamental psycho-physical method of adapting himself to more and more complex conditions has remained the same.

In a somewhat diffuse and often involved manner, the author deals at length with his thesis, using the terms "psycho-physical mechanism" and "sensory appreciation" *ad nauseam*. We must, we fear, plead guilty to finding much of this material difficult to understand and appreciate. That the unity of the organism should

be studied in dealing with its reactions is a point well worth driving home, but that the imperfections of present-day humanity can be so readily explained by reference to defective sensory appreciation seems too narrow a viewpoint. There is doubtless much truth within these pages, but it is not lucidly or tersely presented. Success may often follow the application of the principles here laid down, but a like result is not uncommon with other forms of remedial treatment which are backed by enthusiasm and profound belief.

C. S. R.

Internationale Zeitschrift für Individualpsychologie, November, 1923.
Edited by Dr. ALFRED ADLER.

The first article of this journal is a *questionnaire* drawn up by the International Society of Individual Psychologists, for the understanding and treatment of backward children. It is given in German, English and French. The English translation is not quite accurate—gender is used for sex, boarder to mean foster-child.

The points to be elicited cover a wide range of subjects, and their grouping does not conduce to clearness. They deal with the family situation, the whole environment of the child and his reactions to this, and to his own peculiarities. Stress is laid especially on any physical or mental abnormalities which might give rise to a sense of inferiority, and on the child's courage and attitude towards difficulties. Their aim is to elicit a correct idea of the individuality, its special problems, and the lines on which a solution of those problems should be attempted.

Dr. Leonard Seif writes about the importance of compulsion in life and in neurosis. The problem of life is that of harmonious fitting of the individual into his environment; the neurotic feels external reality as a compulsive interference with his individual freedom, and the sense of inferiority thus produced makes him strive towards an unreal superiority in his neurotic domination of his fellow-beings. The solution aimed at by the individual psychologist is the reconciliation of the neurotic to reality by his understanding of the motives of his neurotic reactions. The necessary condition for cure lies in the realization by the neurotic that "the game is not worth the candle"; the author leaves us in the dark, however, as to how this realization is to be brought about.

Among reports of the First International Congress on Individual Psychology held in Munich in 1922 is one of an address by Dr. Adler, dealing with the part to be played by individual psychology, not only in treatment, but in prophylaxis and philosophy. He states that his standpoint has developed out of an absolute truth—the attitude of mankind to the demands and attacks of nature. This leads to a sense of inferiority, and attempts to form safeguards against this feeling are the essential factors in the development of the individual personality. The fundamental safeguard lies in the mutual aid afforded by social institutions and the formation of social groups; so that the feeling of inferiority and the impulse to social organization—the herd-instinct—are the two tendencies

which must be reconciled by any individual in order to arrive at a satisfactory solution of the problems of life. The neurotic and psychotic fail in their adjustments through over-emphasis of the individual and lack of social instincts, through over-compensations in the form of pride, domineering, vanity, which "disturb the absolute logic of human social life and its results"; in fact, the patient has too much ego in his cosmos.

In another address he considers the neurotic reaction to the environment as an assertion of superiority, a defence against the admission of failure. The tasks of life may be divided into those of social relations, of occupation, and of erotic relations. Neurotics have a false attitude towards these tasks, they overlook their social and universal meaning and see them from a personal standpoint, and therefore they easily lose courage if their efforts are unsuccessful, and react to their failures by demanding special consideration, by insisting that they could do more if they were well, and severe neuroses are equivalent to saying "no demands must be made of me." The neurotic breaks down over his inability to adapt himself to any fresh demand made upon him—such as puberty, choice of vocation, etc. Encouragement may help him to face such demands and prevent the outbreak of the neurosis; and treatment should aim at such encouragement and at a reconciliation with reality.

M. R. BARKAS.

Jenseits von Klug und Blöde. By SANITÄTSRAT Dr. J. BRESLER.
Halle: Carl Marhold, 1922. Pp. iii.

This small book by the editor of the *Psychiatrisch-Neurologische Wochenschrift* is described by its author as consisting of critical remarks. If criticism consists in the transcription of isolated passages torn from their natural context, and appending comments of no particular applicability, then this description may be correct. For the book is nothing but an apparently haphazard collection of quotations, taken from the works of authorities on their subject, and from writers who have commented on those works; and the author has added before and after these quotations such remarks as—"Are these not noble thoughts and deep, eternal truths," without the slightest attempt to consider their scientific meaning or any evidence that he understands them at all.

The first part of the booklet deals with Einstein's theory of relativity, and compares this revolution in metaphysics with the social revolution in Russia; he finishes up by saying: "It is painful to have to see that the present time, dark and miserable as it is, is so rich in disappointing expectations and promises for the future, which it owes to its own weakness of judgment: these are exemplified by Einstein's "Picture of the World," Braunstein (Trotzki)-Lenin's "Paradise" of this pair of saviours, Steinach's "Rejuvenation" by means of ligature of the vas deferens.

The second part purports to deal with psycho-analysis. It consists again almost wholly of quotations; sometimes these are

merely accompanied by some sarcastic remark; sometimes they are compared with quotations from the classics, to show that they are not wholly new thoughts, and sometimes indications are given of similar ideas in the writings of psychiatrists of the old school, who are said to have known all that psycho-analysis has pointed out, but to have rejected it as valueless. Finally the author quotes the recent work on the pathology of dementia præcox by Sir F. Mott, as evidence that the only research worth doing in psychiatry is that into the inherited causative factors of insanity. He leaves quite out of consideration those works of Freud which explicitly state that in the causation of mental disease innate and acquired factors are at work in varying proportions, and that what psycho-analysis attempts to alter is the reaction of the individual to his internal and external environment.

The author has evidently read much of the psycho-analytic literature; and this book shows very clearly how one's understanding of a subject is governed by one's preconceived ideas and prejudices. In psychiatry, where psycho-analysis is admittedly in its infancy, he scoffs at the tentative suggestions which do not fit into the old categories. The importance of the instincts is admitted in causation, but denied in treatment. The pregenital stages of the libido are rejected, though every psychiatrist has ample evidence given him of their reality. In philosophy the author is more open-minded, and he discusses with some fairness the life and death instincts and their relation to race and self-preservation; he is rather scornful about the tendency to recapitulation, yet admits its universality as a characteristic of both living and non-living matter. The whole handling of the subject is reminiscent of the compulsion neurotic ambivalency—the conflict between belief and doubt.

M. R. BARKAS.

Psycho-Analysts Analysed. By P. McBRIDE, M.D., F.R.C.P., F.R.S.Edin. With an Introductory by Sir H. BRYAN DONKIN, M.D.Oxon., F.R.C.P. London: William Heinemann, 1924. Crown 8vo. Pp. ix + 142. Price 3s. 6d. net.

"He's got 'em on the list;
They'll none of 'em be missed!"

This well-known Gilbertian skit is illustrative of the manner in which we would despatch those persons who create in our minds disagreeable and painful thoughts. The words of the Lord High Executioner seem so aptly to express the attitude adopted by the opponents of psycho-analysis that we cannot refrain from quoting them.

Dr. McBride obviously does not find himself in agreement with either psycho-analysts or psycho-analysis. He says—"They cannot be permitted to treat mere hypotheses—and those highly improbable at best—as legitimate premisses upon which to found their arguments." After careful consideration, he tells us, it has appeared to him that psycho-analysis does not deserve a position in scientific

medicine. The book as a whole must make unpleasant reading for the psycho-analyst. Nevertheless it contains one statement which should afford him some consolation. Speaking on the subject of psycho-analysts in general, it is pointed out that, though they may differ on minor points, they are all unanimous in their acceptance of certain fundamental principles: "All seem to have accepted the unconscious mind as described by Freud, and the same author's statement that all dreams are significant." This agreement in regard to essential principles is of some significance.

The author realizes the importance of the conception of the unconscious mind, "upon whose existence the whole fabric of psycho-analysis depends." In consequence he has singled out this particular principle for special attack. Since his retirement from practice, Dr. McBride tells us, he has read many books on the subject of the new psychology. It does not transpire whether he has had the opportunity of studying the psychoses. There is not the least doubt that such study is of great assistance in the proper understanding of Freud's conception of the unconscious. According to Stoddart—"Neuroses, psychoses and dreams are fundamentally the same, the only difference being that the neurotic or psychotic lives his dream." It must be admitted that many of the insane live in a world of phantasy, and both their actions and utterances seem prompted by those primitive instincts and repressed wishes which constitute the unconscious mind.

In reference to the mental mechanism which enables us to push unpleasant thoughts into deeper recesses of the mind, some further remarks made by the Lord High Executioner mentioned above occur to us—"I've got a list of society offenders who might well be underground, and who never would be missed."!

Since Dr. McBride would abolish psycho-analysis from the realms of scientific medicine, it is proper we should know what method of treatment he suggests should take its place. Unfortunately he has no alternative therapeutic measure to offer us. It is true the author would have us realize that mental activity is the result of a corresponding activity in the nerve-cells and their associated fibres. But surely this is ever before us. No doubt some authors state that they prefer to leave out physiological considerations when discussing the subject of psycho-analysis in order to avoid confusion; but we believe very few, if any, psychologists would ignore the physiology of the brain.

We must admit we do not find Dr. McBride's conclusions convincing.

NORMAN R. PHILLIPS.

Part III.—Epitome of Current Literature.

1. Neurology.

The Present State of Research on Epilepsy. Summary given at the Annual Meeting of Bavarian Psychiatrists, July, 1923, in Munich [Der Gegenwärtige Stand der Epilepsieforschung]. (Referat. erstattet auf der Jahresversammlung Bayrischer Psychiater am 28 Juli, 1923, in München.) Part I: Clinical; Constitution; Brain. Reichardt, M.

Looking back over the last ten years of this research certain progress has been made.

(1) At present the tendency is to lay less stress upon the question as to the nature and existence of so-called genuine, as distinct from symptomatic, epilepsy, until the whole subject of the disposition to epileptic symptoms is more fully investigated.

(2) We must suppose that the endocrine system may have some relationship to convulsive and epileptiform manifestations, but at present there is no adequate evidence for the belief that these can be wholly explained or are wholly caused by endocrine disorder.

(3) It is certainly an advance that investigation is now directed rather to the problem of the convulsion itself, and that in so doing, the whole body, including the endocrine system, is taken into consideration. It is manifestly possible that some degree of bodily (*i.e.*, extracerebral) predisposition plays a part, besides some brain condition.

(4) One of the main problems of to-day is to discover the nature of the specific epileptiform mode of reaction, investigating the brain (growth, brain material, developmental disturbances), and the endocrine system in the search for its basis.

(5) A more complete study of the brain is needed, especially in the direction of its volume, growth, pressure of cerebrospinal fluid, cerebral oedema, and the relation of these to the endocrine system, to find some common factor.

(6) The problem of convulsions is a part of the whole study of the brain. Possibly the convulsion is for the brain analogous to the extra-systole for the heart, or the convulsion may be a disturbance of normal brain functioning of some particular kind, affecting movements of brain substance or of cerebrospinal fluid.

(7) We must avoid preconceived ideas, assumptions of toxic or innate factors as yet unproved. There may be several kinds of epileptic predispositions, not merely one.

(8) It may be useful to try to divide up the conception of epilepsy into various groups, since it has hitherto proved impossible to find any unified solution of the disease as a unity. The author suggests the following divisions in the realm of convulsive manifestations:

(i) General and individual convulsive tendency (those in vascular and toxic conditions, *e.g.*, eclampsia, poisons, and traumatic con-

vulsions). Individual differences of liability to convulsions, conditioned by brain, endocrine, or other peculiarity.

Infantile convulsions, depending perhaps on a special disposition, ceasing in course of development or persisting as a result of infantile brain injury or developmental defects.

(ii) Epileptiform modes of reaction to exogenous injuries and organic brain diseases, on a basis of special predisposition.

(iii) Group of idiopathic epilepsy; types due to developmental brain disorders and endocrine abnormalities. Possibly a purely dynamic form.

(iv) Epileptoid cases without convulsive attacks.

These suggestions are only tentative, and investigation must show their value. It seems likely to be useful to adopt the conception of an epileptiform mode of reaction, analogous to the schizoid and catatonic ones found in organic disease. The idea of the convulsive tolerance fits only into Group I, and that of the epileptic reaction tendency into Group II of this scheme.

The author believes that generally speaking a return to the study of the brain, after the recent flight from this into the endocrine system, is the most useful direction for research at present.

Part II: Investigations of Metabolism [Stoffwechseluntersuchungen].
Wuth, O.

The author discusses the successive theories of the causation and nature of epilepsy which have played a part in directing research into the metabolic changes, and concludes that up to the present no final or complete solution has been found. He believes that the fundamental change lies in the brain, probably in the realm of physical changes in colloid and ionic exchange, and vascular and tissue water content, and that physical chemistry will throw much light on the subject. Such disturbances of metabolism as have been found prove only a general variability within rather wider limits than normal, but whether these are cause or effect of the cerebral disturbance is as yet unproved. On the question of the convulsions, he sums up his views by saying that (1) the investigation of body-fluids gives no proof for distinguishing idiopathic epilepsy from epileptiform attacks of other genesis, and (2) the alterations of the body-fluids in the fit are not yet sufficiently cleared up to draw any positive conclusions as to the biochemical processes taking place. On the subject of idiopathic epilepsy—(1) that the investigation of body-fluids does not yet enable us to distinguish this group from the rest, and (2) that so far research does not enable us to establish either the nature or the seat of the fundamental disorder.

Only exact, detailed and numerous investigations can provide the facts which may bring a solution of these problems.

Part III: Anatomical [Anatomisches]. Spielmeyer, W.

Another negative statement: as regards the acute changes found *post-mortem* in the brain, nothing has been found which is constant in epilepsy or absent in many other conditions. In the chronic

changes the author holds that we must take for epilepsy the view that we take for many other disorders, namely, that pathological anatomy can distinguish certain peculiarities which, even though not constant, yet taken together when present are probably more or less characteristic and of value for making a probable diagnosis. Just as in general paralysis certain areas show a predisposition to certain types of change, and an exacerbation of the disease runs parallel with certain further cerebral changes, so he thinks that epilepsy is probably a disease process—possibly of more than one type not yet distinguished—which tends to affect certain areas in a way not wholly unlike many other processes, but with some predominant characteristics, and associated with certain other abnormalities frequent though not peculiar to the disorder. Thus he regards sclerosis of the cornu ammonis and cell degeneration with glia proliferation of the Purkinje cells of the cerebellum as among the most constant changes, though not invariable, and believes that when these occur together with certain developmental defects attributed to an innate inferiority, akin to stigmata of degeneration, and also with Chaslin's "Randsclerosis" (sclerosis of the superficial layers), the whole picture gives as great a probability for the diagnosis of epilepsy as do similar degenerative changes for general paralysis when associated with other typical paralytic pathological changes.

He emphasizes that the value of pathological anatomy has been in the past, and is likely to be in the future, the gradual narrowing of the field by the exclusion of other conditions which were previously regarded as epilepsy, from, for instance, gross cerebral lesions, to the entity of the late form of amaurotic idiocy recently established by the author. It yet remains to discover whether, when all other entities have been separated out, there will remain any unified group to be regarded as genuine or idiopathic epilepsy.

Part IV: Genealogical [Genealogisches]. Rüdin, E.

The many difficulties of this form of research upon epilepsy are pointed out, beginning with the uncertainty of diagnosis and thus of the phenotype which is the starting-point. Much work of a rather unsystematic kind has been done which gives as a whole an impression that epilepsy and a great number of other psychopathic conditions are genetically connected. Very little has yet been completed which conforms to the strict requirements of modern methods. As far as it goes, it seems to establish with some degree of certainty the fact that idiopathic epilepsy does rest on some inherited basis, and that this basis is definitely recessive and not dominant. Far more must be done before we can know what other factors are part of this inherited factor, and whether they are monomeric or merely associated and separable. The author stresses the importance of remembering that it may be some clinically quite different manifestation which forms part of the entity (*e.g.*, cataract and myotonia atrophica), and that here clinical and genealogical workers can help one another. Research into inheritance

may disclose some associated condition having in common with epilepsy some physical disorder which may give the clue to the nature and causation of both.

As far as any surmise can be made from the material available, it would seem that certain forms of congenital weakmindedness are the most frequent associates of epilepsy. The relation to alcoholism is definitely not proven; there is no convincing evidence that alcoholism in the parents, apart from the general psychopathic tendency which leads to the alcoholism, has any effect in producing epileptic descendants. For true dipsomania there is some evidence of a relation both to epilepsy and to manic-depressive insanity. Between epilepsy and other psychoses no constant relationship has been shown.

The author pleads for intensive research on approved lines, studying the descendants of known epileptics, with and without collateral taint, and of apparently normal parents of epileptic children and their collaterals. He mentions that his figures probably err on the side of being too low, as he neglects those children that have died with infantile convulsions, some at least of whom would probably have been true epileptics if they had lived. He hopes that geneological research may help towards clearing up the question of the relation of idiopathic epilepsy to convulsions of other origin, and the connection between inherited disposition and external precipitating causes, and may also lead to some classification of the possibly different hereditary groups which present a similar clinical picture, and are so far grouped together as idiopathic epilepsy.

M. R. BARKAS.

- (1) *The Sequelæ of Encephalitis Lethargica.* (Brain, vol. xlvii, part 1, 1924.) Duncan, A. G.
- (2) *Memorandum on Encephalitis Lethargica.* (Ministry of Health, 1924.)
- (3) *General Considerations about Encephalitis* [Allgemeine Betrachtungen ü. d. Enzephalitis]. (Schweitz. Archiv für Neurol. und Psychiatrie, vol. x, 3, 1922.) v. Monakow.
- (4) *A Case of Encephalitis with Cortical Localisation* [Un cas d'encéphalite épidémique aiguë à localisation corticale.] (Bull. et mem. Soc. med. des Hôpitaux de Paris, 45, Pt. 3, 1921.) Delater and Rouquier.
- (5) *Behaviour Changes Supervening upon Encephalitis in Children.* (Lancet, vol. cciii, October 28, 1922.) Auden, G. A.

The recent recrudescence of epidemic encephalitis is of especial interest to psychiatrists on account of the mental symptoms which may occur during the acute stage or develop at a later period. Dr. Duncan followed up a series of 136 cases for two to five years, and was able to trace 83 to a recent date. In 78 of these mental sequelæ appeared to have become chronic. The mental symptoms took the form of defective memory for recent and remote events, inability to fix the attention, abnormal drowsiness and tendency to narcoleptic attacks, sometimes alternating with nocturnal

restlessness. Altered disposition, irritability, "nervousness" and morbid fears also occurred. Some cases had attacks of dissociation and automatism, while others developed psychoses such as mania or melancholia. Children under ten were the most liable to develop severe mental sequelæ, which often took the form of moral changes, while in the next two decades the liability was much diminished. Over the age of thirty the incidence of mental sequelæ again increased in association with the development of the Parkinsonian syndrome. "It would seem as if in these cases there is a progressive paralysis of mind closely analogous to the rigidity of the body, without there being of necessity proportional mental deterioration." Several cases are described in detail. One of these may be quoted, as similar conditions may come under the notice of those who work in mental hospitals.

"A girl, æt. 14, recovered from the acute stage with the residual signs of unequal pupils and exaggerated knee-jerks, but remained very apathetic. A few months later she was admitted to a mental asylum as a typical case of dementia præcox, and her condition improved until three years after the onset of the illness, when she became restless, noisy and delusional, and, after a period of excitement, she passed through a dull stuporose phase and finally became bright and intelligent. For the last ten months she has been apparently normal."

The paper contains a full description of the physical signs of encephalitis which may most commonly be localized to lesions at or about the nuclei of the third cranial nerves. These signs may be slight, consisting of mild ptosis, loss of accommodation, or nystagmus. Hence the necessity for a most careful physical examination in order that cases which appear to be simple psychoses may not be overlooked. The paper is worth careful study.

The memorandum issued by the Ministry of Health contains a brief history of previous epidemics of encephalitis. It appears that the highest prevalence is in the winter and spring months. The following observations on the sequelæ are of special interest:

"Sequelæ may appear (1) in the course of the original acute malady and persist after partial or complete disappearance of all other symptoms, or (2) after the original acute attack has apparently terminated or possibly has passed unrecognized. Such effects are declared after a variable latent period ranging from some weeks to over two years. No definite opinion, therefore, can be expressed until after some years as to whether an attack of acute encephalitis, however mild in appearance, may or may not result in serious sequelæ.

"The more important of these after-effects are:

"(1) *Mental symptoms*.—In all probability these are dependent upon lesions of the cortex of the brain. Irritability, maniacal outbursts, hebetude, complete change in moral character and self-control, lying and theft may appear for the first time in the conduct of the victim of encephalitis lethargica, as well as grosser mental defects (including even homicidal attacks) which result in the patient's transference to a mental institution. These symptoms

are of all grades of severity, and may be associated with nervous lesions. They are usually seen in children or in the young adult.

"(2) *The Parkinsonian syndrome*.—This condition closely resembles and may be identical with paralysis agitans as seen in the elderly or middle-aged adult. Fewer cases of disease are more pathetic than juvenile examples of this condition, and alike in children and adults it must be regarded as one of the gravest sequelæ.

"(3) *Excito-motor sequelæ*.—Myoclonus: sudden, shock-like muscular spasms of limbs, sometimes also of diaphragm and larynx. Halting and slowed movements (bradykinesia).

"(4) *Other sequelæ*.—Of these, increased tone of muscles, paralysis, various sensory symptoms and curious respiratory spasms (polypnœic periods of apnœa, Cheyne-Stokes' respiration), may be mentioned."

As regards treatment, lumbar puncture occasionally causes some relief of symptoms, and is useful in making a diagnosis from tuberculous meningitis, cerebrospinal fever, and syphilitic conditions. Hypnotics are best avoided and morphia may lead to respiratory complications. Isolation is advisable, although the degree of infectivity appears to be slight.

Numerous attempts have been made to correlate the physical and mental symptoms with the pathological findings. Lesions are most commonly found on the floor of the cerebral ventricles in the grey matter around the Sylvian aqueduct, in the optic thalamus, and in the corpus striatum. The brain may be affected directly and diffusely or indirectly through the small blood-vessels of large but not sharply defined areas (v. Monakow). Delater and Rouquier report a case with delusions, confusion, hallucinations and other mental disturbances, with subsequent development of acute transient dissociated paralyzes and myoclonic movements. At the *post-mortem* examination it was found that the lesions were entirely confined to the cortex and meninges.

Behaviour changes in children following encephalitis have given rise to a problem which still awaits a satisfactory solution. These changes were summarized by Dr. G. A. Auden as follows: "Increased emotional instability, with a reduction in the volitional inhibitions, leading to aberrations of conduct, a marked restlessness, especially in the evening, accompanied by nocturnal wakefulness (which may be associated with hallucinatory manifestations), an apathy or inability for sustained attention, and an irregular type of intelligence capacity as revealed by educational tests. The majority of these cases show heightened sensibility to environmental stresses." In contrast Dr. Auden states that amongst the cases of cerebrospinal meningitis notified in the same area during the previous three years, no such character changes have been found. More seldom there may be intellectual deterioration amounting to imbecility. In the cases displaying perversity of conduct the prognosis is by no means unfavourable, but recovery is usually slow—in fact a matter of years. The children rarely do well at home, and are best subjected to the discipline and orderly routine of an institution. The difficulty is to find the necessary accommodation.

The cases can rarely be dealt with under the Mental Deficiency Act, as the defect is not necessarily permanent; but they may come within the scope of the Defective and Epileptic Children Act of 1914. Intractable children who cannot be educated in ordinary schools or be kept in ordinary institutions, and whose parents are unable to make adequate provision, may also be dealt with under the Poor Law. But lack of accommodation often renders these measures inoperative.

W. S. DAWSON.

2. Psycho-Pathology.

Psychopathology and General Pathology [*Psychopathologie und allgemeine Pathologie*]. (*Zeitschr. für die ges. Neur. und Psychiat.*, April, 1923.) Maeder, A.

The author makes a plea for more unification in medical science, and especially for the combination of mental and physical pathology, regarding man as a whole. Hitherto there has been too much concentration on one aspect, with a forced attempt to see the whole from that one point. Thus psychology has suffered from being forced into biological categories, biology from research only through chemistry and physics. We need some new point of view from which man can be considered as a unity, and from which all the different fields can be surveyed and brought into a synthetic relation with one another. Monakow has attempted this in his *Biology of the World of Instinct*. The analytical, causal orientation of thought, which fosters differentiation, must be combined with the intuitive synthetic and teleological orientation which enables us to recognize the common factors and unifying principles.

He proposes to deal mainly with general pathology and psychopathology from the synthetic standpoint. In practice many bonds have been formed between them recently, but there is a lack of correlation between the different fields, and the author knows of no work in which pathology is treated as a unity, joining in their proper hierarchy anatomy, physiology and psychology. Team-work must provide a basis for correlation. Specialization brings about a psychic deformity and maims any universal interest. Even the research worker, who believes himself objective, is influenced by his own trend of interests, and needs association with workers in other departments.

The relationship between medicine and psychology has improved in the past twenty years, as is shown by the increased demand for more prominence of psychological medicine in the curriculum.

It is universally recognized that in the midst of some severe mental conflict a purely bodily illness may occur. The doctor regards the pathological process as a mere bodily disease, which has been helped by the emotional disturbance; he speaks of an external cause and predisposing factors. He takes, for example, a case of a young girl, who after an unhappy love affair, gets tuberculosis. Her reproaches towards the unfaithful lover are repressed and turned in upon herself, she torments herself with

destructive self-criticism, and her confidence in life and humanity is undermined—she sinks into a renunciation of life. Then she catches a chill and develops tuberculosis, which resists treatment. Out of the severe mental conflict which remains unresolved there has arisen the destructive feature of a lurking hatred turned upon the self, and the depression, distrust and hatred of life are transferred into the physical plane. The longing for self-destruction undermines the whole constitution and acts catabolically on mind and body.

The classical medical view regards the infectious factor as the essential point, and groups investigation and treatment round that, ignoring the emotional basis as a mere predisposing factor. The author believes that more is needed for a complete understanding of the case, and that the most weighty pathological factor lies in the destructive element which arose out of the mental conflict, the infection taking a secondary place. The therapeutic results support this view, since healing began then and then only, when the patient had given up her hatred and become reconciled to life. The usual conceptions stressing the exogenous factor only give us an unduly narrow horizon, and the mental aspect is as incomprehensible and invisible as were the bacteria to Virchow in his fight against the origin of puerperal fever waged by Semmelweis.

He next deals with the transition from the mental to the physical manifestations, the bridge between them being the function of "feeling" or emotion, with its effects upon the vegetative nervous system. Not only "functional" disorders may be thus produced, but even organic ones. The extrovert type, whose adaptation to life is mainly through feelings, is particularly liable to discharge mental conflicts through physical paths. We know little of the mode of this transformation of energy. A specific quality of stimulus may be thus directed into bodily channels, *e.g.*, a destructive one; this may be seen in the genesis of a gastric ulcer. There may have been for years repressed emotions of a peculiarly destructive activity, even if unconscious to the patient; for him all his troubles centre round the stomach, he denies any conflict, and can be made only with difficulty to face and deal with the psychical situation. Here it is the gastric juice, an autolytic ferment, which is the destructive agent, as the tubercle bacillus was in the other case. Obviously the mere proof of such a destructive factor at work is not sufficient; the doctor must know how to solve the conflict, must take up the fight against the destructive element and get the patient to join in the fight.

Another conception of the relation of mental and physical manifestations deserves mention. In the course of many chronic bodily diseases there enters gradually a complication, the secondary intermingling of mental factors—complexes which become mobilized during the illness; all sorts of negative, inhibitory factors organize themselves about the disease process and reinforce the destructive tendencies, weakening the forces of defence and healing. Freud's "flight into disease" holds also for organic disorders. The patient regresses to an infantile attitude, and utilizes the situation to

retreat from his obligations or to dominate his environment. The doctor has to deal not merely with a cardiac insufficiency or a paraplegia, but with all the negating powers of the patient's unconscious. All the primitive and negating trends which did not find a proper place in the development of his character, which did not become incorporated in his mental structure, *i.e.*, what was not fought and overcome, organizes itself into a dangerous force which allies itself with the bodily illness, which thus becomes the means of expression of an inner, hidden mental state.

The relative helplessness of therapeutics in chronic physical ailments is partly connected with this unrecognized fact. The chief hindrance to be overcome may be the repression of the mental difficulties, and only the doctor trained in psychology can help. This is one reason for the public lack of faith in doctors and love of quacks; we can fight quackery only by means of a more profound conception of the task before us and integral training for it, altering our scientific attitude into one which regards the human being as a unified whole. The healing processes in miracles, faith-healing and the like are not explained by calling them suggestion. We must give more attention to the difficult problem of the inner mental development before we can give a hypothetical explanation of such complicated processes as these, in which physiological, psychological, religious and sociological factors all play a part. In the phenomena of mystics, Yogi, and even spiritualists, there may be presented quite new relationships between mental and physical manifestations, which have been unnoticed owing to the limitation of our horizon. Meditation may bring about differentiation and change in the hierarchy of mental functions and an unusual disciplining of the whole personality, the therapeutic possibilities of which are a new *America* to be explored.

Psychopathology and general pathology.—The study of disease may be divided into two main groups: (1) Degeneration and pathological changes such as new growths, which are the effects of the destructive tendency; (2) defence as the reaction of the organism, and attempts at healing or reconstruction as manifestations of the creative tendency.

Mental manifestations of the destructive tendency are seen in melancholia, in which all positive tendencies are inhibited, both in the emotional life and in the bodily processes. The conscious personality has fallen under the sway of an internal force of destruction, outside the personality but within the organism. This destructive agent produces the constant self-criticism, the obsessing doubts of psychasthenia; attached to bodily sensations, hypochondria. This degradation of the personality is comparable to the regressive metamorphosis or degeneration of tissues. In normal life processes of anabolism and catabolism are duly coordinated according to the requirements of the organism; the balance of ambivalent tendencies corresponds to this in the mental life. Where growth occurs, anabolism predominates; where an organ atrophies after its functional period is over, catabolism predominates. The creative and destructive agents are always at work as elementary

factors of life. They are balanced in normal digestion ; the gastric ulcer occurs when the destructive autolysis gains the upper hand.

The origin of malignant growths is still obscure ; their unrestrained growth is of a purely destructive kind. The horizon of research should be widened to seek the possible mental factors reinforcing the destructive agent.

The defence mechanisms of the body studied in pathology are probably also at work under normal conditions, perhaps holding the destructive agent within its prescribed bounds. In disease there may be either weakening of the defence or an increase of the destructive forces, or both. The mind defends itself by repression, which, like immunity reactions, is, within limits, a provisional measure of safety ; but these limits may be overstepped. Another mode of defence is the assumption of indifference, or a kind of anæsthesia with retention of consciousness, akin to the feigned-death reaction of animals ; or, again, defiance and negativism may afford an isolation of the disease process by repression or projection, just as a diseased bodily area may be encapsuled or amputated.

In the concentration of forces on defence resistance or immunity results. Mental alexins may also be formed to resist the destructive process, such as reaction formations playing a part in the building up of the personality.

Another mode of defence is that of the function of lysis—the dissolving-up of superseded organs or mental attitudes ; the religious concept of sacrifice involves the giving up of the dominance of infantile impulses and fixations under pressure of the healthy critical faculty. In the mind, as in the body, we have the factors of solution (lysis) and fighting (alexins). Tissue overgrowth in granulations, lasting production of immunity, healing carried beyond mere defence to reconstruction, occur in the body ; reintegration, healing and new development may also be manifested in the mind and personality. The "healing tendency" of the old school of medicine is real, even though imperfectly understood. Its occurrence in the realm of mind is illustrated by the case of Benvenuto Cellini, whose initial character defects were overcome after a neurosis involving a process of self-punishment and discipline, so that he became a unified personality and a productive creative artist.

Replacement, renewal and regeneration, products of the creative agent leading to growth and development, are limited in the body by material and structural boundaries. On the mental plane its scope is wider. Function, previously latent and repressed may become activated. Many religious mechanisms have significance as assisting the healing process and fostering the integration of the personality. Psychoneuroses and functional psychoses are essentially creations of a deviation and inhibition of development ; regeneration, restitution, and the continued integration of the personality are the essential elements of healing.

M. R. BARKAS.

3. Pathology.

The Paralytic Process and the Centres of the Extra-Pyramidal Motor System [Der paralytische Prozess und die Zentren des extra-pyramidal-motorischen Systems]. (Zeitschr. für die ges. Neur. und Psychiat., February, 1924.) Kalnin, E.

The occurrence of extra-pyramidal motor symptoms in general paralysis has long been known. Vogt and Nielschowsky have published the pathological findings in two such cases with choreiform movements, in which the paralytic process had attacked not only the cortex but also the striatum, producing appearances resembling those of Huntingdon's chorea. Here the findings corresponded with the clinical picture; but it was surprising when Spatz published sixteen cases of general paralytics who had shown when living no symptoms suggestive of this incidence, but in which the striatum was found in a precisely similar condition, whereas the pallidum, in contrast to the nucleus caudatus and putamen, was not affected. He explained this by the fact that the latter are developmentally, like the cortex, part of the fore-brain wall, whereas the pallidum belongs to the mid-brain.

This finding induced the author to investigate the frequency of incidence of the paralytic process in the striatum and other parts of the extra-pyramidal system, and he selected those areas which are marked by an intense iron reaction—that is, the striatum, pallidum, corpus Luysii, nucleus ruber, substantia nigra, and nucleus dentatus cerebelli. In the cortex he took those areas usually much affected, such as the granular frontal cortex and the insula, as well as a region less commonly much affected—the occipital cortex in the neighbourhood of the area striata. His object was to see whether the most susceptible areas were really determined by their evolutionary history, taking the telencephalon on the one hand, and the diencephalon and mesencephalon on the other. Besides the regions mentioned he took also the claustrum and thalamus. He confined his study to the evidences of the paralytic inflammatory process, taking as its chief signs the plasma-cell infiltration and spider cells, and further the intra-adventitial deposits of iron pigment. More detailed studies of the whole structure and relative decrease of nerve-cells are in progress, aimed at determining the extent of damage done by the process. Only samples were taken, not serial sections. These were stained by Nissl's thionin method and the iron reaction determined. Three grades of intensity were differentiated.

His findings confirmed those of Spatz—that the striatum is one of the regions of predilection in general paralysis. In all the thirty-five cases both nucleus caudatus and putamen and the grey matter joining them showed changes which were equal in intensity with those of the most affected cortical regions. The claustrum was negative in only one case, and is more constantly affected than the occipital cortex. Only the grey matter was altered, the white matter being seldom affected. In contrast to this the pallidum,

which has unfortunately been grouped with the striatum under the name "lenticular nucleus," showed only slight changes in no more than four of the thirty-five cases, and the same holds good for the other centres of the extra-pyramidal system, all of which *may* thus be affected by the paralytic process, but are definitely not areas of predilection for it. The thalamus occupies a mid-way position; it is less frequently affected than the least affected region of the cortex, and to a slighter degree, but much more than the extra-pyramidal system (cortex 30-35, thalamus 28, nucleus Luysii 9, pallidum, substantia nigra, nucleus ruber, 4).

The only patient who had shown extra-pyramidal symptoms in life—choreiform athetotic movements and hypotonia at first, later rigidity, and who was deeply demented and could utter only inarticulate sounds—did not show more marked changes in the striatum than many other cases, and the pallidum was negative.

Thus the telencephalon would seem to be particularly susceptible to the paralytic process, in contra-distinction to the mid-brain, including in this the pallidum and the lower nuclei. Of the basal nuclei the thalamus is most affected, but much less than the cortex.

Spatz has suggested that the selection of the striatum accounts for involuntary movements and speech disorder of the disease. The author has no clinical evidence on this point to correlate with his findings.

M. R. BARKAS.

Studies on the Cerebrospinal Fluid with an Acetic Anhydride-Sulphuric Acid Test. (State Hospital Quarterly, February, 1923.)
Boltz, O. H.

The test is essentially a modification of Liebermann's test for cholesterol and the technique is as follows: Place 1 c.c. of spinal fluid in a Wassermann tube. Add 0.3 c.c. of acetic anhydride drop by drop; shake; add 0.8 c.c. conc. H_2SO_4 drop by drop; shake; after about five minutes examine colour of fluid against a white background. A blue-pink or lilac is positive, the blue tinge only being characteristic of the reaction. It is recommended to try the test on the spinal fluid of an advanced parietic in order to get an idea of the positive reaction.

No theoretical explanation of the test is attempted, but a few points about its behaviour are noted: (1) Sulphuric acid alone does not give the reaction. (2) Acetic anhydride alone does not give the reaction. (3) Heating the cerebro-spinal fluid to boiling will not destroy the substance giving the test. (4) The substance giving the test is thrown down with the globulins in the Noguchi test, after centrifugalization a saline emulsion of the sediment being positive, the supernatant fluid negative. (5) The test has nothing to do with the excess of globulins. (6) The substance does not seem to be cholesterol.

The result of the test on a large number of psychoses and pareses leads to the following conclusions:

(1) The test is 100 *per cent.* positive with the spinal fluids from cases of general paresis.

(2) Among psychiatric cases the test was found positive predominately in cases with neuro-syphilis.

(3) The more advanced and active the syphilitic condition of the central nervous system, the more positive will be the A.A.S. reaction. The test may prove to be of value in the prognosis of neuro-syphilis.

(4) In psychoses not due to or complicated with syphilis, and of a functional nature, the A.A.S. test is negative.

(5) The writer is convinced that the test is specific for neuro-syphilis, but is more apt to be evidence of the destructiveness of the spirochæte on nervous tissue.

(6) The test differentiates two groups of tabetics—one giving a negative reaction (no active pathological changes going on in the central nervous system), the other a slightly positive reaction, showing also a paretic gold curve.

(7) In four cases of neuro-syphilis with a negative spinal fluid Wassermann, the A.A.S. test was positive. A. WILSON.

4. Clinical Psychiatry.

Mental Conditions found in Certain Sexual Offenders. (Lancet, i, 643, 1924.) Smith, Hamblin.

Hamblin Smith contributes the results of an examination into the mental state of 100 proven and convicted cases of indecent exposure (50 cases) and indecent assault (50 cases). The age-grouping of the cases is instructive and the implications arising therefrom are important. Sixty-three were under thirty, 21 were between thirty-one and sixty, and 16 were over sixty. It will be noted from these figures that there is a tendency for these offences to fall after the age of thirty till that of sixty, when there is a sharp rise. One of the latter, a man of 63 years of age, had a record of 29 previous convictions of this kind, and 25 *per cent.* of the whole series had been previously convicted of similar offences. This is a very significant fact in view of the frequency in which mental conflict (31 cases) was considered to be the determining causal factor.

The main groups into which the cases could be divided on the results of the examination were as follows: Insane 8, mentally defective 26 (including 6 imbeciles), senile degeneration 11, mental conflicts 31, epilepsy 1. In only 17 cases were the results negative.

These facts afford an eloquent testimony of the importance of an adequate examination of this class of offenders before conviction. The actual judicial methods employed are revealed by the fact that of the 100 cases, 15, including 2 insane men, all the 6 imbeciles and 4 other mental deficient were sentenced to imprisonment *without any preliminary mental examination.* G. A. AUDEN.

Psychiatric Moving Pictures [Psychiatrische Bewegungsbilder]. (Zeitschr. für die ges. Neur. und Psychiat., vol. lxxxv, 4/5.) Kraepelin, E.

When the Munich clinic was started it was thought that the taking of moving pictures would be a useful aid in the study of

motor processes, especially in the case of movements of expression. This has not been carried out, for various reasons, but the apparatus has proved very useful in teaching. It was possible to show types of movement which are not always available for demonstration—such as attacks or fits of various kinds, and other movements in chorea, tics, myoclonus, in dementia præcox, mania, and in idiots. Moreover, by showing pictures of a large number of similar cases their common and characteristic peculiarities are impressed on the mind of the observer.

Again, the moving picture makes it possible to place on record movements which are very rare, and this is helpful for research. Series of pictures taken in a given case show very clearly the exact extent of change, and methods of treatment and their effects can be shown.

In spite of the obvious advantages of this aid, it has not become popular, owing to the costliness of the apparatus and material required, and to certain difficulties in their utilization. The pictures can be taken only in a good light, either out of doors or with special fixed lighting arrangements, so that it is not easy to catch exactly the condition required in the patient, and focussing is a difficulty; since the results can be judged only after development, many failures occur before a satisfactory picture results. Hence it may be years before a thoroughly suitable set of pictures can be obtained.

It seemed a pity that the set of pictures obtained should be available only in Munich, and that owing to the high prices they could not be added to. For these reasons an arrangement has been made with a commercial firm, who have prepared sets of the existing pictures, and will add to their numbers as more are taken, and it is hoped that the sale of these will enable more work of the same kind to be undertaken. It is hoped that other institutions taking such pictures will also get in touch with the same firm (the Neue Kinematographische Gesellschaft in Munich), so that as complete an interchange as possible may occur of the available films.

The series of films already prepared with some degree of completeness are those of encephalitis lethargica, dementia præcox, epilepsy and hysteria, war neuroses, mania, paralysis of various types, chorea and athetosis, endocrine disorders, and movements of idiots. A number more are in course of preparation, such as encephalitis in children, drunkenness and delirium tremens, Alzheimer's disease, and Wilson's disease. Brief explanations will accompany the films.

M. R. BARKAS.

Hearing one's own thoughts in an Affection of the Left Temporal Lobe [Gedankenhören bei Affection im linken Schläfenlappen].
(*Zeitschr. für die ges. Neur. und Psychiat.*, February, 1924.)
Klein, H.

The author emphasises the value of observations made in mentally normal people of phenomena associated with some known organic condition which resembles those found in psychoses, since in the latter the localization of the physical basis of any given

manifestation is more difficult and complicated. In the former the mode in which the symptom originates can also be studied more easily.

The hearing of one's own thoughts spoken is important in connection with the genesis of hallucinations. The case described is one of a man of 49, who complained of an increasing speech difficulty, which at times made him either unable to speak or to use the wrong words to express his meaning. He had pains in the left side of his head and paræsthesiæ in the left hand, and at times a subjective "sharp" smell. His pulse was always very slow—58 when examined. The right conjunctival reflex was sluggish, there was slight apraxia with the left hand, and slight aphasia. No other organic signs. Fundus normal, hearing and vestibular function normal, Wassermann reaction negative in blood. After three months three provocative doses of salvarsan were given, after which the Wassermann reaction was positive, and the patient then complained of a dull pain in the left side of the head, paræsthesiæ in the right side of head and right hand, and his aphasia was worse—sometimes he could not understand what was said to him or what he read, and he mentioned a new symptom. This was that he seemed at times, especially when listening attentively, to hear a conversation of two or many voices which expressed his own thoughts. This often happened when he had been listening to some noise or speaking, and seemed to come from the same place as that had been, though he could distinguish it perfectly from what he really heard, and recognized it as his own thought. It seemed to come from without, but to work in the right side of his head, whereas the left side was quite quiet, and on one occasion he later felt feverish and had paræsthesiæ in the right side of the head. After the last injection he found his own voice and that of others and musical sounds all seemed changed to him and strange, as if they came from some distant depth. He had pain in his head in front of the left ear, and vomiting. A week later all these sensations had disappeared.

The long history made a tumour improbable, and the diagnosis of a syphilitic vascular lesion was the most probable one. The increase and disappearance of the subjective symptoms ran parallel with the aphasia, and pointed to an involvement of the cortex in the neighbourhood of Wernicke's area, temporarily increased as a reaction to salvarsan, together with some affection of the first, and perhaps the second, temporal convolutions in front of Wernicke's area. The author knows of only one similar case quoted in the literature, that of Sanz, where there was disease of the right ear, with hallucinations, giddiness and speech defect, and where there was some suspicion of schizophrenia. In the author's case the ear was not involved and the mental condition was otherwise normal, the patient remaining at his work throughout. Hence the only apparent cause for the hallucinations was the lesion of the cerebral cortex. The author does not agree with Meynert and Neisser's view that the projection of the patient's own thought was due to a morbid self-absorption, for in his patient this was not

present. Nor does it fit in with Kraepelin's suggestion that an increased reactivity of the motor and kinæsthetic areas can be responsible for the thought-hearing. The lowering of inhibitory influences on the motor speech area in sensory aphasia can hardly be the cause of the hallucinations, or these would be commoner in sensory aphasia.

In this case it was not all thoughts that were heard, but mainly those which he had a certain degree of difficulty in formulating, when this was combined with a distraction of attention to some real external sound. At times he heard the words distinctly, but could not reproduce them in speech. The thought-hearing was apparently produced by the combination of a certain state of attention, a certain central stimulus from the lesion of the auditory cortex, and a certain degree of sensory aphasia. The subjective and external auditory sensations fused with the thoughts and gave them their hallucinatory character.

M. R. BARKAS.

Mental Disorders of Children. (The State Hospital Quarterly, February, 1923.) Glueck, Bernard.

No clear-cut, well-organized statement of psycho-pathological issues is possible in the child as it is in the adult. Much energy in this direction is devoted to re-examination and re-valuation of the traditional hypotheses of causation, but it is becoming more and more clear that such issues are simplified by the understanding of ordinary, everyday events of life in the adaptive difficulties of man. This is especially noticeable in children where there has been no prolonged disease or disintegration, either physical or mental, and the simplicity and relative naturalness of the disorder impresses itself as a "reactive manifestation" on the part of the individual to certain events or situations in his life experiences as a biological and social unit.

The high degree of specialization which characterizes modern medicine encourages a too frequent neglect of the patient as a personality, and only exceptionally does the physician or surgeon seek to discern in the problems of the personality as a whole an explanation for the specific disorder of an organ or system. Such a complaint may be merely a way of expressing a much deeper and more inclusive problem of the personality or a tool by which the patient hopes to achieve a more acceptable adjustment to his social environment. Whether one is dealing with the mere tantrums of childhood, with vomiting, headache, convulsive manifestations, with more pronounced anxiety states and obsessions, with delinquencies such as stealing, lying or running away, it is essential to search for the meaning of the disorder in the child's economy, for the rôle it plays in his efforts to adapt himself to environment. Manifestations of a neurotic or psycho-pathological nature which may have their roots in constitutional disorders or in inherited or acquired tendencies or toxicities are not here belittled, but it is emphasized that even where the issues can be explained by pathological factors, the element of the personality, and the situations of life surrounding the individual exert a modifying influence on

the manifestations of the disorder as well as on therapeutic endeavour. In the child much more than in the adult the striving for recognition and enlargement of the personality render him subject to a utilization of disease in the service of the ego. Disordered behaviour may be purposive attempts at some sort of adjustment, and that this may lead to a serious mal-adjustment strengthens the need for a thorough understanding of the rôle which a child's reactions plays in his personal economy. Frequently an apparently perverse or unhealthy manifestation of behaviour is nothing more or less than a reaction to an imperative instinctive demand gaining expression, and this should not be thwarted, but guided into more healthy channels. The failure to recognize this and attribute it to some obscure constitutional or hereditary factor has largely retarded progress in the field under consideration.

A psycho-pathological disorder is frequently met with where there is an hereditary or constitutional element complicated by conditional influences of life experiences, and here greater emphasis should be laid on the latter in the management of the problems than on theories of heredity and predestination. Into such life experiences may enter especially the parents, school and playmates, and therapeutic measures must take account of the child's reactions towards these various factors, factors which often bear neurotic influences themselves. Much of what is met with in the psychopathology of childhood is quite explicable on the ground of unhealthy conditioning influences. For this reason, and because well-delineated disease entities are so seldom met with in children, an inclusive classification of such manifestations is apt to be unreal and to some extent misleading. Nevertheless, a tentative classification under the headings given below may prove of some value if the complication of causation is always borne in mind:

- (1) Arrest of intellectual development in varying degrees.
- (2) The constitutionally psychopathic children.
- (3) The psychoses of childhood.
- (4) Organic nervous disorders of childhood.
- (5) Functional nervous disorders of childhood.
- (6) Disorders of conduct.
- (7) Endocrinopathies of childhood.

A. WILSON.

5. Treatment.

Occupational Therapy.

- (1) *Relationship of Occupational Therapy to Rehabilitation.* Ellon, Fdk. G.
- (2) *The Pre-Industrial Value of Occupational Therapy in Mental Hospitals.* Foley, Edward A.
- (3) *Reconstruction Schemes in Hospitals for Mental and Nervous Diseases.* Kidner, T. B.
(*Arch. of Occupat. Therapy*, April, 1924.)

(1) In a large number of cases where there has been actual damage to body or limb, and the utmost skill of doctor and surgeon

still leaves some loss of function, rehabilitation means "restored to former rank and position in so far as is physically, mentally and vocationally possible." During his stay in hospital a patient passes through many departments, all of which bring their utmost skill to bear on the case, yet a large percentage is being discharged with a degree of physical unfitness coupled with mental inertia which makes their economic value to the state almost negligible. Their minds are trained round their disability, they are entirely dependent on others, dissatisfied with themselves and the result of their treatment, antagonistic to everything, almost Bolshevik in nature and unfitted for anything but the occupational therapy workshops. There are greater possibilities in occupational therapy than are at present realized or practised in restoring the human machine to work by its own motive power instead of being continually pushed from without.

Two factors which are at present being neglected, and which are of extreme importance in restoring a patient's independence, are complete co-operation in the various stages of his treatment and the training of the mental outlook of the patient himself. From the time he is on the operating table until he is again restored to society, doctors, nurses, occupational therapists, social workers, everyone concerned in his treatment should think of his needs and possibilities in the light of his injury, environment and mentality, always aiming at his replacement in industry or restoration of earning power.

It is the mental inertia which is so difficult to overcome, but if we remember that the whole scheme of existence has forced necessity on us as the most important urge to all who are engaged in creative work, we have some indication of the line of treatment to follow. An individual appreciates his own work in the light of its commercial value, so how can we expect to arouse his interest and enthusiasm by teaching him work which is little more than play? Where possible it should be the aim to restore his capacity in his own particular employment, but failing this, before leaving hospital, he should be able to see the actual marketable value of his work, for only in this way can we hope to stimulate that spirit of initiative and self-reliance which will make him an independent member of society.

(2) and (3). Even yet the value of employment to the large class of patients too deteriorated to work in the various departments of hospital upkeep is not sufficiently recognized. Idleness always breeds discontent, and this class is far happier and contented with some sort of employment, however simple, instead of being allowed to slip into a state of apathy or absorption in hallucinations or delusional ideas. The main object is to stimulate and to maintain interest, and this requires considerable patience and skill on the part of all those engaged in such instruction. While mental and physical improvement are the results most desired, it must not be overlooked that many useful articles are produced which can be used in other departments of the hospital.

Many patients so treated will improve in their occupational

capacity as well as physically and mentally, and can be promoted to work of greater industrial value in the departments of hospital upkeep. It is found from experience, however, that a certain proportion of these relapse when less attention and observation is given to them and have to be returned to the pre-industrial workshops. Suitable occupations for this class are weaving, willow-work, brush-making and rag-rug making.

A plan is given of an ideal workshop arrangement with separate departments for the various grades of industries, beginning if necessary with habit-training and simple exercises. From this patients are promoted to pre-industrial occupations, employment under medical supervision, community workshops outside the hospital (in which may be also treated potential hospital cases), or home as the case may be. The value is emphasized of having such workshops separate from the living and sleeping departments, and entailing outdoor exercise in going to and fro.

A. WILSON.

6. Mental Hygiene.

State Legislation for the Mental Examination of Persons Accused of Crime. (*Mental Hygiene, January, 1924.*) Glueck, S. Sheldon.

In a former number of the Journal we expressed the wish to hear more of the Massachusetts law, of which Dr. Vernon Briggs was, in a sense, the father, and which provides for the routine mental examination of certain classes of persons accused of crime. This wish has now been gratified. Mr. Glueck writes from the legal aspect, but with complete sympathy for the medical position.

The legislative authority for the Commonwealth of Massachusetts enacted in 1921 that all persons who were indicted for a capital offence or who were known to have been indicted for any other offence more than once, or who had been previously convicted of felony, should be examined as to the existence of any mental disease or defect which would affect their criminal responsibility. At the outset, we may remark that a good illustration is here afforded of the folly of enshrining matters of this kind within the rigid limits of a statute. When this particular law had been enacted, it was noticed that a number of offences in which mental examination of the accused person is highly desirable did not come within the definition. Attempted murder, in which the capital nature of the crime is often only avoided by chance, was one of the omissions. The number of cases reported to date for examination is 142. This number seems very small. But, as Mr. Glueck says, it takes some time to get a scheme of this kind into perfect working order. There is, probably, some opposition to overcome. And, further, we are not certain what offences come under the title of felony in Massachusetts. Twenty-nine of the reported cases were not examined, 13 because they were out on bail, and could not be found by the examiners, and 16 for other reasons.

Of the 113 cases examined (71 of which were capital offences)

mental abnormality was found in 38. This latter number is a striking proof of the value of such examination; and it also affords some disproof of the assertion, often made by lawyers, that if psychologists had more to do with the administration of the law it would result in the vast majority of offenders being found mentally abnormal. Eleven cases were found to be insane, and were committed to mental hospitals. Three cases were recommended for further observation. Seventeen were found mentally deficient, of whom three were dealt with as "defective delinquents." That the remaining defectives were not so dealt with does not appear to be entirely the fault of the courts. Massachusetts, like other communities, has passed wise legislation without providing the machinery for carrying it into effect, and institutions for female defective delinquents appear to be non-existent. In 7 cases the diagnosis was psychopathic personality or constitutional psychopathic inferiority. Mental conflict, which must, we presume, have existed in some of the cases, is not mentioned. Probably the examiners thought it best to proceed with great caution at the outset of the scheme. Such a decision was, no doubt, a very wise one.

The examinations were made by psychiatrists engaged in mental hospital work. In the first instance these officials appear to have performed this most difficult and responsible duty gratuitously. It then seems to have occurred to those in authority that this plan did not err on the side of generosity, and the sum of *four dollars* was allowed for each examination. We are not sure whether this sum was awarded to each examiner (if more than one was engaged in the case), or whether it was shared between them. In either event the fee strikes us as nothing short of an insult.

No obligation lay upon the court to accept or to act upon the findings of the examiners. But the opportunity of the examiners to educate judges and lawyers in the psychiatric point of view cannot be over-emphasized. We have found in this country that courts are quite ready to consider sympathetically the reports of an examiner when experience has shown them that he is to be trusted. Indeed, the more enlightened of our magistrates are calling for such assistance. And further, it is only by making many such examinations that we shall attain to the possession of the knowledge of these cases which is absolutely necessary if we would advise our legislators in their attempt to devise some means of dealing more rationally with offenders.

M. HAMBLIN SMITH.

Part IV.—Notes and News.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE usual Quarterly Meeting of the Association was held at the Rooms of the Medical Society of London, on Thursday, May 22, 1924, under the Presidency of Lieut.-Col. E. Goodall, C.B.E., M.D., F.R.C.P. The Council and various Committees met earlier in the day.

MINUTES.

The minutes of the previous meeting, having already been published in the Journal, were taken as read and confirmed.

OBITUARY.

The **PRESIDENT** said it was his sad duty to bring to the notice of members the fact that a colleague, Dr. Albert I. Eades, who was Medical Superintendent of the North Riding Asylum, Yorkshire, had passed away under lamentable circumstances. He asked members to express their sympathy in the usual manner, which they did by rising in their places.

BUSINESS ARISING FROM THE PREVIOUS COUNCIL MEETING.

The **PRESIDENT** said the next point concerned a Charter for the Association, which was mentioned at the Association's last meeting. The Council then gave authority for the Solicitor of the Association to be consulted. It was left in the hands of the Treasurer, Dr. J. Chambers, and he had been in communication with the Solicitor to the Association. The Solicitor strongly approved of the application, and the Council to-day had appointed a small Sub-Committee to deal with the matter, consisting of the President, the General Secretary, Dr. C. Hubert Bond, Dr. F. H. Edwards, Dr. W. F. Menzies, Prof. G. M. Robertson and Dr. M. J. Nolan. If any members of the Association had any questions to put or suggestions to make regarding the powers to be claimed, the Council hoped these would be addressed to Dr. Chambers.

The last point concerned a proposal to start Divisions of the Association in New Zealand, Australia, Ceylon, and other parts of the Empire. This, it was considered, was a matter of considerable importance, which would entail a good deal of thought and tactful negotiation, and would take up a good deal of time; and the Council thought it best to delegate the consideration of how best to proceed in the matter, and how best to get into touch with those who ought to be communicated with, to a Committee, and felt that the Committee dealing with the matter of the Charter might well undertake this too. The Association would be duly informed of the result.

Agreed.

ELECTION OF NEW MEMBERS.

The **PRESIDENT** nominated as scrutineers for the ballot Dr. Menzies and Dr. Edwards.

The following candidates were unanimously elected:

MILLER, ROBERT STEWART, M.D.Glasg., Director, El Khanka Mental Hospital, Egypt. *Address*: El Khanka, Egypt.

Proposed by Drs. H. W. Dudgeon, S. J. Gilfillan, and S. Elgee.

MCLAGAN, FRANCIS M., M.B., Ch.B.St.And., Assistant Medical Officer, Hanwell Mental Hospital, Southall, Middlesex.

Proposed by Drs. A. Daniel, G. A. Lilley, and W. D. Nicol.

HARRIS, JOHN STUART, M.B., Ch.B.Edin., Assistant Medical Officer, Hanwell Mental Hospital, Southall, Middlesex.

Proposed by Drs. A. Daniel, G. A. Lilley, and W. D. Nicol.

MACKAY, GEORGE WILLIAM JOHN, M.B., Ch.B.Edin., Assistant Medical Officer, St. Andrew's Hospital, Northampton.

Proposed by Drs. D. F. Rambaut, Norman R. Phillips, and R. Worth.

THE NEW NURSING REGULATIONS.

Prof. G. M. **ROBERTSON** said he wished to bring forward a matter which concerned the Association as a whole. The General Nursing Council in Scotland was prepared to agree to the same conditions as had been agreed to in England in regard to the examinations for the Certificate in Mental Nursing, but they insisted on two conditions. The first of those was that the Medico-Psychological Association accepted the Preliminary Examination of the General Nursing Council in substitution of their own Preliminary Examination. The second condition was that the Medico-Psychological Association ceased to hold its Preliminary Examination in future in Scotland.

The question was a very large one, and there was not time to deal with it now. He therefore asked that it be placed on the agenda of the next meeting of the Association, and that it be discussed first by the Education Committee, and afterwards at the Council Meeting.

Agreed.

THE MAUDSLEY LECTURE.

An adjournment was then made to the Barnes Hall of the Royal Society of Medicine, where Dr. J. CARSWELL delivered the Fifth Maudsley Lecture, taking as his subject, "Some Sociological Considerations bearing upon the Occurrence, Prevention and Treatment of Mental Disorders." The Chair was occupied by the President of the Association.

At the close of the lecture, the PRESIDENT said that they would all desire to thank Dr. Carswell for his very interesting and illuminating lecture. Dr. Carswell's pioneer efforts in the early treatment of mental disorders and the linking up of that treatment with general medicine were well known, and he did not think the Association could have done better than invite him to give the Fifth Maudsley Lecture.

Dr. W. R. DAWSON proposed a vote of thanks to Dr. Carswell. The lecturer was a very old friend of his, and he remembered very well the pleasant time which he spent in his company going round the wards of his hospital in Glasgow about twelve years ago, when he (the speaker) was President of the Association. The value of treatment without certification was brought home to him in a very forcible way on that occasion, although it was a case of preaching to the converted so far as he was concerned, for he had already supported that principle.

A point which struck him very much in the lecture was the value of the wards such as Dr. Carswell had described of the opportunity they afforded to nurses for training in mental disease. The ordinary hospital general nurse had no training in mental work, and anyone who had done little private practice in mental diseases, and had been obliged to employ—as one was obliged—hospital nurses on occasion, knew how very helpless most of them were when faced with a mental case. As an example of the mistaken attitude which nurses took up he might instance one. She was asked by the matron to go down into the country to look after a patient, and was told that it was a mental case and, of course, would require special management. "Oh," she said, "I think I can manage it all right; I have recently been taking lessons in ju-jitsu!"

He might perhaps mention, as bearing out Dr. Carswell's point with regard to the influence of poverty and bad nourishment upon the insane, that when, some years ago, he was investigating in the City of Dublin for the Royal Commission on the Care of the Feeble-minded, he divided the schools up into three classes: (1) Those composed of better-class children—usually the children of small clerks and shopkeepers; (2) children of skilled artisans in fairly constant employment; (3) children of the lowest class, such as street dealers and casual labourers; and he found—the finding related to mental deficiency, but he thought it had a wider connotation also—that the number of mentally defective children was enormously larger in the lowest class, and gradually decreased as one went up into the higher classes of the community. That is what one would expect if one adopted that point of view. The class of children who showed the very largest proportion of mental abnormality—7 *per cent.*—were the children in the workhouse schools.

He thought the general impression they would all derive from Dr. Carswell's eloquent lecture was one of encouragement. He did not himself believe in the pessimistic views commonly expressed with regard to the future of the race. After all, although there might be a tendency to diverge from the normal to the right or the left, there was also a tendency to come back to the normal. Even supposing the subject of eugenics had never been preached, and nobody had taken any notice of family history, he still thought—lamentable as such omission would have been—that the results would not have been so bad as some would predict owing to the natural tendency, shown in all biological statistics, to return to the normal. At all events they had seen in Dr. Carswell's lecture a sort of aurora borealis breaking over the hills of Scotland and across the Border.

He could not call it the dawn, because the dawn did not arise in the north, but he hoped it would not be of a temporary character like some lights they had known. In conclusion, accepting Dr. Carswell's view that a little vanity was a useful stimulus towards doing good work, they might congratulate him on possessing a certain amount of that useful foible, to judge from the quality of the lecture he had given that afternoon.

Dr. J. G. SOUTAR seconded the vote of thanks to Dr. Carswell for an interesting and valuable address. There had been a delightful blend of the philosophic outlook and the practical application of it in what he had said, and therein he had paid one of the highest testimonies to the great physician whose name those lectures bore. It was Maudsley more than anyone else who showed them that psychology was not a matter confined entirely to the unsound mind, that its great purpose was not merely to cure mental disorder, but to do all that could be done to prevent such disorder arising. The great claim which had been urged by Dr. Carswell that afternoon was that much could be done, not merely to prevent or diminish the incidence of mental disorder, but to raise the general level of mental soundness of the race. That was the aim of psychology to-day. There were several points in Dr. Carswell's lecture which would furnish texts for a lecture in themselves, but his audience would carry such points away with them and think them over; they included not only the points he had elaborated, but many others which he had only incidentally suggested, and which remained to be developed.

The vote of thanks was carried by acclamation.

Dr. CARSWELL, in acknowledgment, thanked the audience not only for their appreciation, but for their patience in enduring his rather bare statistical account and his rather Scottish exhortations. He was sufficient of a Scotsman to admit that he never saw an audience before him without feeling that he wanted to do them good!

This terminated the proceedings.

SOUTH-EASTERN DIVISION.

THE SPRING MEETING of the Division was held by the courtesy of the Committee of Management and Dr. H. Wolseley-Lewis at the Kent County Mental Hospital, Maidstone, on Wednesday, April 30, 1924.

Members, as they arrived, were conducted in small groups, each with an officer of the hospital as guide, to see the many interesting and instructive features of the hospital and grounds.

At 1 p.m. they sat down to luncheon, at the conclusion of which Col. NATHAN RAW proposed the health of Dr. Wolseley-Lewis, to which the latter replied.

Dr. WOLSELEY-LEWIS then led the members through the most interesting parts of the hospital, and demonstrated the possibility of creating within walls, to all outward seeming those of a prison, the efficiently cheerful wards of a modern mental hospital.

At the ensuing meeting, at which Dr. Chambers took the Chair, the minutes of the Autumn Meeting, having been published in the JOURNAL, were taken as read and confirmed.

Dr. Noel Sergeant was elected Hon. Divisional Secretary, and Drs. A. Helen A. Boyle, A. A. W. Petrie, F. R. P. Taylor and H. Wolseley-Lewis were elected Representative Members of the Council for the year 1924-25.

The election of the three members of the Divisional Committee of Management to fill vacancies was deferred to an adjourned meeting to be held on May 22, 1924.

The following gentlemen were elected ordinary members of the Association:

FREDERIC CECIL MARSH TAYLOR, M.R.C.S., L.R.C.P.Lond.

Proposed by Drs. M. A. Collins, J. A. Topham, and Noel Sergeant.

THOMAS RONALD FORSYTHE, M.B., Ch.B.

Proposed by Drs. H. Wolseley-Lewis, W. E. Collier, and Noel Sergeant.

ROBERT MELVINE MACFARLANE, M.B., Ch.B.

Proposed by Drs. H. Wolseley-Lewis, W. E. Collier, and Noel Sergeant.

An invitation to hold the next Autumn Meeting of the Division at Peckham House was received from Dr. King, and accepted with pleasure.

PAPER.

"A Retrospect and Its Lessons," by H. WOLSELEY-LEWIS, M.D., F.R.C.S.

[Abstract.]

DURING the nineteenth century great amelioration in the lot of the insane had taken place. Madhouses became asylums, and later mental hospitals; keepers became attendants, and later highly trained nurses. Reflection on these evolutions in the past enabled us to visualize the best lines of development in the future.

Analogies existed between the early years of the nineteenth and twentieth centuries. In each case a great war, with its concomitant economic and social difficulties, shook the nation to its foundations; in each case an awakening of the public conscience in regard to the treatment of the insane can be observed. An Act was passed, in 1808, "permitting County Justices to raise money to erect asylums for pauper lunatics." In 1815 a Committee of the House of Commons was appointed "to consider of provision being made for the better regulation of Madhouses." The evidence taken at this Committee gradually led up to the Act of 1845, which made it compulsory for local authorities to provide for their pauper insane, and established the Lunacy Commission, which first visited this institution on September 30 of that year. Similarly, at the beginning of the twentieth century, in 1908, the Report of the Royal Commission on the Care and Control of the Mental Defective was issued, followed in 1913 by the Mental Deficiency Act. A succession of Bills for the early treatment of mental diseases had been promoted, culminating in the Bill now before Parliament. The Lunacy Reform Conference convened by the Board of Control was held in 1922, and in the same year was issued the Report of the Committee appointed to investigate the charges made by Dr. Lomax in his book, *The Experiences of an Asylum Doctor*.

At the beginning of the nineteenth century methods of treatment of the insane included flogging, confinement in iron cages, chains and manacles, etc. In considering the conditions under which the insane existed in those days, one had to bear in mind the state of public opinion at that time. Slavery had just been abolished; public hangings were common spectacles; prison reform was in its infancy; discipline in the navy and army was enforced with great severity; the Poor Law Amendment Act was not passed till 1834.

There was ample evidence to show that our predecessors' treatment of their patients was due to ignorance rather than indifference. The partizans of restraint and non-restraint methods carried on a heated controversy from 1814-1840, and some of their arguments are of great interest to-day. It gradually came to be recognized that moral treatment was better than mechanical restraint, that it was essential to have attendants of a humane disposition and plenty of them, and that classification of the patients was of the greatest importance. In this institution, in 1837, the wages of a male keeper were £27 per annum, and of a female £16 per annum. They were quite untrained; their diet was meat, bread, cheese, butter and beer; they apparently had no regular leave from duty, and they were in a proportion of one to twelve noisy and one to twenty quiet patients. In their book of rules they are ordered not to strike or use harsh or intemperate language to the patients, but that they must at no time leave their galleries without having first locked up in their rooms any patients who were liable to be violent, except such patient is properly secured.

A return made in 1825 showed that there were in Kent 210 lunatics and dangerous idiots, and in 1828 the Court of General Session ordered that an asylum should be built to house them. This was erected at a cost of £50,000, and provided accommodation for 174 patients (it has since been added to until it contains more than ten times that number). It was opened on January 1, 1833, and is the twelfth oldest asylum in the country. The original building was intended for the safe keeping of dangerous persons rather than as a hospital for the treatment of mental diseases; it was designed by Mr. Whichcord, the County Surveyor, who was also the architect of Maidstone Gaol, and points of similarity between them are obvious. A glance at its north aspect shows this even now: massive stone walls, small iron-frame windows, absence of ornament; and within at that time narrow stone stairs, low-vaulted ceilings, rows of dark dungeon-like cells with a narrow gallery running between them, dimly lit by an oil lamp; at the angle between two galleries the "keeper's room"; floors of stone, whitewashed walls,

windows covered with a wire screen ; sanitary accommodation a small sink and single earth closet ; furniture a few deal tables and forms fixed to the floor ; heavy wooden chairs in which patients were strapped ; a primitive wooden bedstead with a central drain in it, and straw for bedding.

As there was no night staff, the patients had no means of attending to the calls of nature, with the result that we read frequent complaints of the foul smells, and even stone floors were replaced in some of the wards with slate, as being less absorbent. Dysentery appeared there in 1834, and cholera in 1854. In 1835 the water consumption was only 10 gallons per patient per day. On visiting the cells in the morning it was not uncommon to discover that a patient had died during the night. Such was the routine, and we read of no way in which it was relieved ; no books, no games, no entertainments. At the same time entries in the visitors' book lead us to suppose that this was well thought of as an asylum, as witness the following : " I have much pleasure in expressing my satisfaction as to the arrangements and situation as well as the management of the asylum, which I find superior to any I have witnessed in various parts of the Continent as well as in Ireland." The comparative absence of coercion and restraint is also repeatedly commented on. A minute of the committee in 1840 expressed a desire that restraint such as might be used in prisons should be done away with ; but in the same year Mr. Sergeant Adams in his report to the Middlesex Magistrates said that he found in this asylum two men who had been chained to their beds for 4½ years, and one female fastened in a coercive chair by a large cuirass of thick leather, her hands being pinioned in front of her ; there were also some 20 or 30 others in manacles. On January 12, 1841, was found the following minute in the records of the Court of General Session in reply to Sergeant Adams' statement, which is instructive as showing the feeling at that time, and emphasizing the fact that the intentions of the authorities were excellent, even if their methods were crude :

" The attention of many members of the Court has been probably drawn to the remarks made by Mr. Sergeant Adams at a meeting of the Justices of Middlesex, relative to the mode of treatment pursued in this asylum towards certain individuals confined therein. The Visiting Justices under this impression have felt it their duty to report to the Court on those cases, and also on the treatment generally pursued towards the patients in this establishment. The cases to which the learned Sergeant is supposed to refer are the following, *viz.*, James Ward and William Doolan. The first of these persons was tried at the Assizes in Maidstone in the year 1834 for murder, and was acquitted on the ground of insanity. The Medical Superintendent, believing from the peculiarly irascible temper of this man and from the violence of his language that he would do serious injury to those who had the charge of him or to some of the patients, placed him in close confinement in his own room, and this was continued until about 18 months ago, since which time he has been allowed to mix with the other patients in the airing-grounds, but still under restraint, as he is not considered by the Medical Superintendent fit to be trusted entirely. The other patient, William Doolan, is of a very ferocious disposition and great personal strength, and having on one occasion seized a poker which had been very improperly left loose in the gallery, he knocked down the keeper, and was in the act of striking a second blow, when one of the patients seized his arms and thus in all probability saved the keeper's life ; this man has also occasionally been under close confinement, and is at times so ungovernable that it is difficult to pursue a milder treatment towards him. These cases are peculiarly dangerous, and require most careful treatment, and whether they have formerly received closer confinement and more personal restraint than would now, under the mode of management recently adopted at Hanwell and elsewhere, be thought necessary, the general management is not to be judged by these cases, which are the exception and not the rule. With respect to the patients generally, the Visiting Justices can with confidence assert that their health, cleanliness and comfort are closely attended to, that no cruelty is exercised towards them, and that there is no personal violence ; this last is plainly shown by the absence of fear on the part of the patients towards their attendants, and also by the fact that to the inquiries of the Visiting Justices made to the patients when discharged on their recovery, as to the treatment they have received, their answers are uniformly expressive of gratitude for the kindness which they have experienced.

" So great improvement in the treatment of lunatics has taken place within the last few years that people in general form most erroneous opinions when they

hear of cruelty in lunatic asylums, picturing to themselves all the horrors said to have formerly existed in such establishments. It ought to be recollected that the question now debated is whether all personal restraint is to be done away with. Persons who adopt this opinion are perhaps inclined to look with too much harshness on those who do not coincide with them to the full extent, and may use language which conveys to others ideas of cruelty which they themselves do not entertain. Those whom the Court of General Session have appointed Visiting Justices of this Asylum have not been indifferent to this great question. In the course of last spring one of their number visited Hanwell Asylum and Bethlehem Hospital for the purpose of seeing and obtaining information on the mode of treatment in those establishments. In consequence of what he reported, the Visiting Justices requested the Medical Superintendent to visit the Asylum at Hanwell, which he accordingly did, and inspected that establishment with Dr. Connolly, the Resident Physician. At the next meeting of the Visiting Justices he presented a report to them in which he recommended that certain articles of dress, such as are used at Hanwell for particular classes of patients, should be provided. This was accordingly done, and by these means the necessity for confining patients to their beds at night and the use of belts and muffs have to a great extent been done away with. He also recommends the employment of additional attendants with the view of diminishing the restraint, but as there were at that time as many attendants in proportion to the number of patients as in any county asylum, and more than in most, the Visiting Justices did not think it right to employ more until restraint had been reduced as far as possible with the existing establishment. This has in their opinion now been done; they have therefore determined to appoint two additional keepers and two additional nurses with a view of introducing the system of no restraint. It may be necessary perhaps to inform the Court that this system is new, that it is only 16 months since it has been established at Hanwell, but that the success attending it has been such that many other asylums are adopting it, but at the same time it must be remembered that some physicians of great eminence are of opinion it is not so good as that of moderate restraint.

"MARSHAM.

WILLIAM W. T. BALDWIN.

THOMAS TURNER ALKIN.

MAX. D. D. DALISON."

A study of the case-books suggests that medical treatment was of a rather heroic nature: First patient, a woman, admitted on January 3, 1833, suffered, apparently, from recurrent mania and phthisis. On January 6 she had a purgative, on the 7th an opiate, on the 8th pil. gamboge (*pro re nata*); on February 8 she had a purgative, another on the 9th; she then had a severe hæmoptysis, so on the 10th she was bled (14 oz.), and given mag. sulph. (every six hours); on the 12th she had an enema and another on the 13th; on the 18th she had croton oil, which was repeated on the 23rd. On March 6 she had to be confined to her room; on the 16th she had an opiate, and she was found dead on the 17th. The coroner's jury found that she died "By the visitation of God"! Such treatment appears drastic, but it was not unusual. Their idea of hydrotherapy was a "surprise bath"; it was reserved for the very violent. A hood was placed over the head, and a girdle with a rope attached round the waist; the patient was then suddenly pushed into a tank of cold water. Such a tank was provided there in 1843, and the doorway through which the patient came could still be seen. In 1848 the medical officer orders seclusion in a dark room, and that the patient be fastened to his bed by a strait waistcoat and a belt, and remarks that "there are rare cases in which the existence of contrivances for restraining a patient prove a blessing, and their use a simple act of humanity." Both doctors and committee were, however, sincere in doing their best for the patients according to their lights, and there was evidence that curative treatment was aimed at.

It has already been said that the Act of 1845 made it *compulsory* for the local authority to provide accommodation for the pauper insane, and we find the Kent Justices reporting as follows in that year

"It appears to them that in the event of still further accommodation being required, the proper course, and that which would be in accordance with the opinion of the Commissioners in Lunacy, will be to build or purchase or hire a house to which the patients who are considered incurable could be sent, where they could receive all the attention requisite for their cases, while they could be provided for

at a much less cost than by adding to the present building, which is constructed on a more expensive principle, in order to afford advantages to those who are deemed curable."

The result was the opening of the additional building in 1850 (marked green on the plan). In it may still be noticed heavy stone masonry, iron frame windows, and low vaulted ceilings, but it would also be observed that the airing-court was surrounded by a sunk fence and not a high wall, that windows were larger and not covered by wire guards, floors of wood instead of stone, doors with spring locks so that the continual use of a key was not necessary, more associated dormitories and day-rooms, which were larger and lighter and more airy; water-closets were installed, and gas took the place of oil lamps. Dr. Huxley, brother of the famous professor of that name, was Medical Superintendent at this time, and evidently did what he could to relieve the monotony of the patients' existence: football, trap-ball, battledore and shuttlecock were introduced, and playing-cards provided. Steel knives and forks and earthenware mugs and plates were served out; chairs in addition to forms were purchased, and we learn that rubber sheets made their appearance on the iron bedsteads with which the dormitories were furnished. When the additional building was opened an Assistant Medical Officer was appointed, and more attention was paid to the medical treatment of the patients. The nursing staff, however, was still very inadequate, one attendant looking after thirty patients without assistance for a fortnight at a time; out of eighteen wards only two had more than one nurse; there was still no night staff. At this time all the criminal lunatics from Maidstone Gaol were sent here, and were evidently a turbulent element, and many of them quite unfit to mix with the other patients. Such being the administrative difficulties, they could hardly be surprised that restraint was occasionally resorted to, seclusion was frequent, and there was more than one record of a keeper being discharged for striking or ill-treating a patient. One-sixth of the inmates were wet and dirty in their habits; their clothing was often wet during the day and their beds during the night; a large number wore ticken dresses locked at the neck. The medical staff, in their efforts to cope with their patients without resorting to mechanical restraint, used sedatives freely, the usual thing being tinct. opii 1 dr. *t.d.s.* and wine. In severe cases chloroform was given, and its administration repeated at intervals of a few days; shower baths and tartarated antimony were in common use. Under such treatment there seems to have been a fair number of recoveries, but a large number of chronic, degraded, troublesome cases. Gradually an improvement in the conditions under which the patients lived was taking place, and an impetus was given to this in 1863 by the advent of Dr. Kirkman as Medical Superintendent. A band was started, bagatelle boards and other games made their appearance; birds, pictures, plants and flowers were introduced into the wards; entertainments, dances, magic lantern lectures were occasionally given; four days' leave of absence was allowed; a limited night staff was provided. The patients were encouraged to employ themselves usefully as much as possible. Occupation therapy and re-education of the patient whose condition admits of it is of the greatest value. There was now an "occupation officer," whose business it was to see that every patient, so far as his health permits, was occupied in some way or other, and that every effort was made to interest him in his work.

About this time further efforts at improvement were hampered by overcrowding. As control and intelligent observation of the patients became more difficult, seclusion was often, and restraint occasionally, resorted to; accidents, sudden deaths and escapes recurred with ominous frequency. Eloquent of the condition of things was a report of the Medical Superintendent that out of 750 patients, 671 were dirty, violent or dangerous. There was no infirmary ward set apart for the sick, and in 111 of the single rooms and five of the dormitories the floors were still of slate. The case-book notes of this period were of no scientific value, and only average about one per annum per patient; they were chiefly descriptive of violence, abusive and disgusting language, degraded habits, etc., with occasional long explanations of injuries sustained by patients, usually ending up with a statement that "it does not appear that more force was used by the attendants than was necessary." There were constant changes in the nursing staff, no less than 100 nurses and 62 attendants leaving in one year. The Minute Book of the Committee showed frequent dismissals for striking patients, drunkenness, breaking out at night, etc. After such a lapse of time it was impossible to apportion the

blame for all this misconduct and lack of discipline, but it was evident that the staff was recruited from the ranks of the unskilled and uneducated; no effort was made to train them or interest them in their work, which was arduous and difficult; they were badly paid and their hours were long; they had no ideals and no nursing instinct.

Notwithstanding the opposition of the Commissioners to any enlargement of the Asylum, the new building was opened in 1870, and stands, with its large, well lighted day-rooms, spacious, airy dormitories and adequate sanitary annexes practically unaltered to-day—a witness of the progress that had been made in the housing of the insane. They would have the opportunity of seeing three buildings—the old, the additional, and the new—each a type of the period at which it was built, with twenty-year intervals between each period.

Although ideas in regard to the treatment of the insane were becoming more enlightened, improvements matured slowly in large institutions, and the patients still suffered from the ignorance and indifference of the staff. Tell-tale clocks were introduced here in 1876, and there were only four nurses and four attendants on night duty, and these were at times discovered asleep. For many years now the tell-tale clocks have been disused, and there are at present twenty-one female and twelve male nurses on night duty.

During the next thirty years no enlargement of the Asylum took place, but a number of structural improvements had been made in the older buildings. Single rooms were removed to let in more light and air, dividing walls disappeared to form associated dormitories, iron-framed windows were replaced by wooden sashes, heating apparatus was introduced in 1880, earth closets done away with in 1886, and the last of the stone floors disappeared in 1895; walls were plastered, much painting and internal decoration undertaken. At the same time the dress of the patients became better: they were sometimes allowed to wear their own clothing. They had a better and more varied diet; they had more medical attention; they had more entertainments, more walks beyond the asylum grounds; basket and mat making were introduced. One looked in vain, however, for evidence of effort being made to obtain the right type of staff, or to train or to interest them in their work. No lectures were given until 1895, and then but little encouragement to attend them or to pass the Medico-Psychological Association examination was offered. Recruits to the service came mostly from an uneducated, unskilled class, whose ideas of nursing were confined to the prevention of accidents and escapes. A military discipline was maintained; dismissals were frequent; allegations of ill-treatment common; mechanical devices, locked doors, special bath-keys, fire-guards, blocked windows and rigid regulations took the place of intelligent observation by the staff, between whom and the patients there seems to have been little sympathy. The institution was no longer a prison, but it was not yet a hospital.

In 1906 a further enlargement of the asylum took place by the addition of two blocks for 100 each; the laundry was rebuilt, and a boiler-house and isolation hospital erected (marked yellow on the map), and in 1912 a general bathroom was added. During the last twenty years most of the institution has been remodelled with the object of converting what was originally a prison into a hospital, and though there are obvious limitations in so old a building, those efforts had not been altogether unsuccessful; at any rate there was in that institution an exceptional opportunity of studying the evolution of asylum architecture during the last century.

The writer then commented on the difficulties and anxieties occasioned by the war and its after-effects. Nevertheless, he continued, none will deny the improvements that have taken place in the housing, clothing and feeding of the insane, but of far more importance is their treatment as sick persons, and not merely as antisocial units to be segregated from the general community. The whole atmosphere in which they live had altered, and no factor in producing this change is of more influence than the attitude of the nursing staff.

It is not enough to insist on the ethical side of the nursing profession, but proper facilities for teaching and training the staff should also be provided. This they hoped to do in the near future by building a training school and introducing doubly qualified sisters at least in the infirmary and "acute" wards. In the meantime every probationer had to attend each year lectures by the medical officers, tutorial classes by the sister-tutor, clinical demonstrations in the wards, and get signed up

for practical work in various types of ward (including the male wards) and for night-duty. Also it was the practice to put a senior probationer on duty with some particular patient for special observation and individual treatment.

The importance of night nursing in mental hospitals is apt to be overlooked. Training in night-duty was an essential part of every nurse's curriculum. It used to be considered necessary to have a sort of peripatetic watchman continually opening doors and waking people up—presumably to see that they had not committed suicide. What was wanted was an intelligent nurse ready to minister to the mental or physical wants of any patient requiring assistance. At that hospital many of the single-room doors of the convalescent and chronic wards were left unlocked; nurses going round did not needlessly disturb sleeping patients by opening doors, but directly anyone was restless, noisy, or tapped on the door, a nurse went to see what the matter was and did everything she could to alleviate the condition.

I have already drawn attention to the necessity of preventing patients acquiring faulty or degraded habits in single rooms at night. It is especially necessary to prevent recent acute cases acquiring such habits, and this can sometimes only be done by individual attention, and each nurse should have a turn as "special" on this type of case. It is a platitude to insist that patients should not be allowed to lie about; should be encouraged to keep themselves as clean and smart as possible; that their dress should be attractive; that bad manners and bad language should be discouraged; but the tone of the patient automatically rises with that of the nursing staff, and it should be possible some day to entirely eliminate the destructive, degraded chronic of defective habits. In this context I should like to record my opinion that it is a great advantage to have as many female nurses as possible on the male side, provided they are of a refined, educated and well-trained type. The war taught us that greater freedom might be accorded to our patients with good results. We have about 150 patients on the male and 500 on the female side in open-door wards (that is, wards where the door opens with an ordinary handle instead of a key); there are also 32 male patients "on parole," who go out where they like on Saturdays and Sundays. These privileges are much appreciated and rarely abused, and I look forward to a time when a considerable percentage of our patients will be "voluntary boarders." I believe it is important to educate them to have an insight into their condition, and also to encourage in them a sense of responsibility. We have a good many social events, both on the male and female side, at which both sexes are present, and we have whist drives and concert parties largely arranged and carried through by the patients themselves, at which the staff are hardly at all in evidence. I venture to suggest that it is possible to create an *esprit de corps* among the patients—at any rate among those for whom this is likely to be a permanent home. We are very proud of the beautiful carving in our chapel, and of much other conscientious and excellent work that has been done for us by patients.

Mechanical restraint has been abolished almost everywhere; chemical restraint in the shape of sedative drugs is only used here very exceptionally; we rely on prolonged baths, occupation therapy, and skilled nursing.

To refer to what was said earlier in this paper, nothing takes the place of the hand of the nurse, but that hand must be directed by intelligence, kindness and sympathy.

Members were then entertained to tea by Dr. Wolseley-Lewis, which concluded a meeting the full enjoyment of which had been assured by the very great care Dr. Wolseley-Lewis had taken to perfect the arrangements, whereby every member obtained the maximum of instruction and enjoyment.

Divisional Committee of Management.

There were present Drs. C. W. Bower, W. Brooks Keith, H. G. L. Haynes, A. A. W. Petrie and Noel Sergeant, but the meeting of the Divisional Committee of Management was adjourned until May 22, 1924.

SOUTH-WESTERN DIVISION.

THE SPRING MEETING was held, by the kind invitation of the Committee of Visitors and Dr. N. R. Phillips, at the Monmouthshire Asylum, Abergavenny, on Thursday, April 24, 1924.

Dr. Nelis was voted to the Chair.

The minutes of the last meeting were confirmed and signed.

On the motion of the Chairman a vote of condolence with Mrs. Glendinning on the death of her husband, Dr. James Glendinning, was passed, and the Hon. Divisional Secretary was instructed to convey the same to her.

Dr. Starkey was elected Hon. Divisional Secretary, and Drs. R. Eager and J. Soutar as Representative Members of Council.

Drs. J. M. Rutherford and N. R. Phillips were elected to fill vacancies on the Committee of Management.

The following were elected members of the Medico-Psychological Association :

THOMAS LLOYD EDWARDS, L.R.C.P., L.R.C.S.Edin., D.P.M.Lond., Assistant Medical Officer, County Mental Hospital, Bridgend, Glamorgan.

Proposed by Drs. J. McGregor, H. B. Wilkinson, and W. Starkey.

PETER LORNIE, M.D.Edin., Senior Assistant Medical Officer, Monmouth Mental Hospital, Abergavenny.

Proposed by Drs. N. R. Phillips, J. Glendinning, and W. Starkey.

JOHN CHARLES GROSCORT REED, M.R.C.S., L.R.C.P.Lond., Surgeon-Captain R.N. (retired), Assistant Medical Officer, The Old Manor, Salisbury.

Proposed by Drs. J. P. Westrup, S. E. Martin, and W. Starkey.

JAMES REID, L.R.C.P.&S.Edin., Junior Assistant Medical Officer, Hereford Mental Hospital, Hereford.

Proposed by Drs. J. G. Smith, D. M. Cox, and W. Starkey.

A letter from Dr. H. Rayner *re* establishment of a branch of the Mental After-Care Association in the South-Western Division was read and discussed. It was resolved that the Division approved of the proposal and would be pleased to co-operate with the After-Care Association in the matter.

The date of the Autumn Meeting was fixed for Thursday, October 23, 1924, the Secretary to arrange place of meeting.

Dr. S. GROSSMAN then read two short papers : (i) "A Case of Actinomycosis in the Cardiff City Mental Hospital," and (ii) "The Luminal Treatment of Epilepsy."

Both papers gave rise to interesting discussion, and several members spoke of the good results obtained from treatment of idiopathic epilepsy by luminal and luminal-sodium.

Dr. N. LAVERS then opened a discussion on "Some issues arising from the recent case of Harnett *v.* Bond and Adam." An animated discussion followed, in which most of the members took part.

A hearty vote of thanks to Dr. N. R. Phillips for his hospitality closed the proceedings.

During the morning the members had the opportunity of inspecting the Institution, and cases of clinical interest were demonstrated by Dr. Phillips and his staff. They were most hospitably entertained to lunch, and at the conclusion of the meeting tea was served.

NORTHERN AND MIDLAND DIVISION.

THE SPRING MEETING of the Division was held, by the kind invitation of Dr. David Orr, Medical Superintendent, at the County Mental Hospital at Prestwich, Manchester, on Thursday, April 24, 1924.

Twenty-two members were present.

The members were shown over the buildings and laboratories by Dr. Orr in the forenoon, who later entertained them to lunch.

Dr. Orr occupied the Chair, and the minutes of the last meeting were confirmed and signed by the Chairman.

Dr. J. R. Gilmour was re-elected Secretary to the Division, and Drs. W. H. Coupland, E. S. Simpson and J. V. G. B. Tighe were re-elected Representative Members of Council.

Dr. ALEX. CORSAR STURROCK was duly balloted for and elected an ordinary member of the Association.

A letter was read from Dr. Henry Rayner, Chairman of Council of the Mental After-Care Association, stating that their Association was desirous of establishing branches in the Northern Division, and asking for the support of members. The letter was sympathetically received, but in the absence of any definite scheme no action was suggested.

A letter was read from Dr. Tighe about the representation of the Division on the Advisory Committee to the General Nursing Council. After discussion the following resolution was unanimously carried and ordered to be sent to the Council:

"That this Division be represented on the Advisory Committee to the General Nursing Council appointed by the Medico-Psychological Association."

Dr. A. CORSAR STURROCK then gave a most interesting dissertation on "A Recent Epidemic of Encephalitis Lethargica in Manchester." After concisely reviewing the literature of the subject, he gave an account of the symptoms, course, treatment and after-effects of the condition. Dr. Sturrock related the history of many of his own cases to illustrate the varying conditions found. The paper was felt to be a most valuable one in view of the present epidemics. After he had replied to several questions Dr. Sturrock was most cordially thanked for his lecture.

Drs. K. K. DRURY and C. FARRAN-RIDGE then read a paper on "Some Observations on the Types of Blood-Sugar Curve found in Different Forms of Insanity." This embodied a long series of observations, and was illustrated by charts of the various states. Drs. Orr and Shaw spoke to the paper and the authors replied.

Dr. C. W. EWING then reported "A Case of Cysticerci of *Tania solium* in the Brain causing Insanity." He gave the clinical history of the case and exhibited the brain, showing hundreds of cysts throughout the brain-substance.

Dr. R. G. ROWS then gave a short lecture "On the Treatment of Cases of Incipient Insanity during the War." He approached the subject from the point of view of finding the relation of cause and effect in mental illnesses, of examining the cases individually from the biological instead of from the conventional aspect. He pointed out the little value of studying behaviour, because it indicated only a superficial reaction, and did not explain the symptoms. The true illness lies deeper, and can be discovered if suitable investigation is carried out. Dr. Rows gave short accounts of several cases to illustrate his standpoint.

The dates and places for the Autumn Meeting, 1924, and the Spring Meeting, 1925, were not fixed.

SCOTTISH DIVISION.

A MEETING of the Scottish Division of the Medico-Psychological Association was held at the Glasgow Royal Mental Hospital on Friday, May 2, 1924.

Prof. Geo. M. Robertson occupied the Chair.

The minutes of the last Divisional Meeting were read and approved, and the Chairman was authorized to sign them.

The SECRETARY submitted a letter of acknowledgment from Mrs. Miller thanking the members of the Division for their kind letter of sympathy.

Dr. W. D. Chambers and Dr. C. J. Shaw were unanimously elected representative members of Council for the ensuing year, and Dr. Wm. M. Buchanan was unanimously elected Divisional Secretary.

The following candidate, after ballot, was elected an ordinary member of the Association:

MARTHA D. DEVON, L.R.C.P.&S.Edin., L.R.F.P.&S.Glas., Clinical Assistant, Bangour Village, West Lothian.

Proposed by Drs. Neil T. Kerr, C. A. Crichton and W. M. Buchanan.

The CHAIRMAN reported the proceedings at the conference between representatives of the Scottish Division and of the General Nursing Council for Scotland, which had taken place in Edinburgh on March 6, 1924.

The SECRETARY then read a letter from the Registrar of the General Nursing Council for Scotland, dated April 1, 1924, of which the following is a copy:

"General Nursing Council for Scotland, 13, Melville Street, Edinburgh, April 1, 1924.—Dr. W. Buchanan, Kirklands Mental Hospital, Bothwell.—Dear Sir,—Referring to my letter of 10th ult., the questions discussed at our Conference were again considered at a meeting of my Council on 28th ult. I am instructed to inform you that my Council have agreed, subject to the condition undermentioned, to invite your Association to form an Advisory Committee to meet with the Education and Examination Committees of the Council, for the purpose of considering matters pertaining to the Final Examination for Mental Nurses, and to further invite your Association to nominate Examiners for the Final Examination, for consideration by my Council. These resolutions were adopted only on condition that in Scotland one Preliminary Examination for all classes of nurses should be held by my Council on behalf of your Association and themselves. I shall be glad to hear from you after you have consulted your Board.—I am, yours faithfully, W. D. FARMER, Registrar."

It was pointed out that the terms of the invitation contained in this letter were the same as those agreed to in England except in the following respects:

(1) The addendum in England "that the resolutions of meetings of the Advisory Committee of the Medico-Psychological Association with the Mental Hospitals Committee of the General Nursing Council be recommendations to the General Nursing Council" had been omitted.

(2) The words "consideration by the General Nursing Council" had been substituted for the words "appointment by the General Nursing Council" in connection with the nomination of examiners.

(3) In England no condition regarding the Preliminary Examination was attached.

A very full discussion ensued.

With regard to (1), the meeting was of opinion that the addendum was not of great importance, as the institution of an Advisory Committee implied that its resolutions would be recommendations to the General Nursing Council.

Regarding (2) the Secretary explained that he had been assured by both the Registrar and the Chairman of the Education and Examination Committee of the General Nursing Council that there would be no question of the examiners nominated by the Division not being appointed, and that the verbal alteration from "appointment" to "consideration" had been made to safeguard the Council against criticism for delegating powers.

Regarding (3), it was pointed out by several members that as the Preliminary Examination was carried out by the Association as a whole, the Scottish Division could give no undertaking regarding it without the consent of the Association, and that obligations towards nurses presently in training must be discharged.

Dr. C. J. SHAW then moved "that the invitation of the General Nursing Council for Scotland be accepted provided the interpretation of the condition attached is compatible with the views expressed during the discussion (recorded in preceding paragraph), and that it be remitted to the Scottish members of the Council to put the position before the Council at the next Quarterly Meeting of the Association."

Dr. R. D. HOTCHKIS seconded, and the motion became the unanimous finding of the meeting.

The Committee which had met the Nursing Council in Conference was continued in office and Dr. G. D. McRAE's name was added thereto.

The SECRETARY stated that the amendments to the Asylums Officers' Superannuation Act proposed by the conference of interested organizations were now being incorporated in a draft amending Bill, and that no amendment dealing with the Scottish Royal Asylums was included, as the Royal Asylum authorities had not yet come to a decision in the matter. He was instructed to write to Mr. Richardson, the Secretary to the Scottish Royal Asylums Conference, informing him that the amending Bill was presently being drafted, and suggesting that if the Royal Asylums had not come to a decision before the amending Bill was introduced, the matter might be dealt with by means of a permissive clause.

Dr. G. DOUGLAS McRAE, in moving "that a Divisional Chairman be appointed annually, and that Prof. Robertson be elected Chairman of the Division for the ensuing year," explained that the practice in the past of calling some member to the Chair at the commencement of each Divisional Meeting was unfair to such Chairman, as he frequently had to speak of matters on difficulty without preparation.

Dr. T. C. MACKENZIE seconded, and the motion was unanimously agreed to.

The meeting was then adjourned and Members were kindly entertained to lunch

at the Hospital. After lunch, on the motion of the Chairman, the Directors of the Glasgow Royal Mental Hospital and Dr. Henderson were cordially thanked for the arrangements made in connection with the meeting and for their kind hospitality.

On the meeting re-assembling the Chairman intimated that the November meeting would probably be held at the Aberdeen Royal Mental Hospital.

Three interesting cases of organic brain disease were then presented by the medical staff :

- (1) Korsakov's psychosis without neuritis.
- (2) Dementia following delirium probably associated with endocrine insufficiency.
- (3) Alzheimer's disease.

Interesting papers on "Occupational Therapy" were read by Miss DOROTHEA ROBERTSON, B.A.Cantab., Instructress; Miss BRODIE, Lady Superintendent, both by invitation; Dr. A. G. W. THOMSON, Physician; and Dr. D. K. HENDERSON, Physician Superintendent.

The papers dealt with the question of occupation from the point of view of the instructors, the nurse and the physician, and an interesting discussion followed.

Dr. Wm. WHITELAW, M.B., Director of the Western Asylums Research Institute, read a short paper on "A Study of the Blood-Sugar Content in the Psychoses."

Members had an opportunity of inspecting the Occupational Therapy Department of the Hospital, and great interest was taken in the exhibition of craft work done by patients, which included raffia and pine needle basketry, embroidery, underglaze and overglaze painting, rug making, cane work, metal work and toy making.

A vote of thanks to the Chairman concluded the meeting.

IRISH DIVISION.

THE SPRING MEETING of the Irish Division was held on April 24, 1924, at the Central Criminal Asylum, Dundrum, by the kind invitation of Dr. T. Considine, Medical Superintendent, Dr. T. Considine in the Chair.

The members were shown over the institution previous to the meeting by Dr. Considine.

The minutes of the previous meeting were read and signed.

The HON. SECRETARY read correspondence, and explained the present position of the Association as regards the establishment of a Diploma in Mental Disease by the Universities and Licensing Bodies in England, Scotland and Ireland.

A ballot for the election of an Hon. Secretary and two Representative Members of Council was next proceeded with. Drs. Greene and Scroope were appointed scrutineers of the ballot, and it was declared by the Chairman that Dr. Leeper was elected Hon. Secretary for the ensuing year, and that Dr. J. O'C. Donelan and Dr. J. G. Graham were elected Representative Members of Council for the Division for the ensuing year.

The meeting next proceeded to elect two Examiners for the Certificate of Proficiency in Knowledge of Mental Disease of the Association. Dr. J. O'C. Donelan and Dr. R. R. Leeper were elected Examiners for the Certificate.

The following gentlemen were elected ordinary members of the Association :

R. MARSHALL, M.D., F.R.C.P., Medical Registrar, Royal Victoria Hospital, Belfast.

Proposed by Drs. W. R. Dawson, M. J. Nolan, and Richard R. Leeper.

J. E. HERBERT, M.B., B.Ch., R.U.I., Senior Assistant Medical Officer, District Mental Hospital, Omagh.

Proposed by Drs. Patrick, W. R. Dawson, and Richard R. Leeper.

DANIEL LANE KELLY, L.R.C.P.&S.Irel., Inspector of Lunatics and Senior Medical Inspector, Local Government Department, Dublin.

Proposed by Drs. J. O'C. Donelan, M. J. Nolan, and Richard R. Leeper.

WILLIAM CALWELL, O.B.E., M.D., M.Ch., Consulting Visitor in Lunacy to the Lord Chief Justice of Northern Ireland.

Proposed by Drs. W. R. Dawson, M. J. Nolan, and R. R. Leeper.

JOHN WATSON, M.D., B.Ch.Edin., Resident Medical Superintendent, Londonderry District Asylum.

Proposed by Drs. M. J. Nolan, W. R. Dawson, and R. R. Leeper.

FRANCIS LEO McLAUGHLIN, M.B., B.Ch., N.U.I., Assistant Medical Officer, Tironaill Mental Hospital, Letterkenny.

Proposed by Drs. J. C. Martin, R. R. Leeper, and H. R. C. Rutherford.

The meeting next proceeded to fix the dates of meetings of the Irish Division for the ensuing year.

Having regard to the fact that the Annual Meeting of the whole Association would, this year, be held in Ireland, it was decided to abandon the Summer Meeting of the Division, fixed to be held in July next, subject to the approval of the President of the Association.

The following dates were fixed for the meetings of the Irish Division :

Autumn Meeting to be held at the Royal College of Physicians on Thursday, November 6, 1924; Spring Meeting to be held on April 23, 1925; Summer Meeting to be held on July 2, 1925.

The meeting next proceeded to discuss the present position of the Association as regards the future training and registration of mental nurses in Ireland. After a somewhat lengthy discussion, the following resolution was proposed by Dr. J. A. Greene, seconded by Dr. J. Mills, and passed unanimously :

"That we, the Members of the Irish Division of the Medico-Psychological Association of Great Britain and Ireland, again request the Government of Ireland to give proper representation on the Irish Nursing Council to medical men engaged in the active treatment of insanity, and who are and have been responsible for the training of the mental nurses in this country."

The Hon. Secretary was directed to forward this resolution to the Minister of Local Government, together with a covering letter stating that the Division was prepared to wait upon him as a deputation, whenever he could receive it, in order to express to the Governmental authorities the importance of this urgent matter.

The meeting next proceeded to discuss the circular letter of the Association to all Universities and Licensing Bodies in the Kingdom as regards the establishment of a Special Diploma in Mental Disease.

The Hon. SECRETARY informed the meeting that the Conjoint Boards of the Royal College of Physicians and Surgeons of Ireland had, he understood, decided to create such a Diploma, and the Hon. Secretary also reported that he had interviewed the heads of the Medical Schools of Trinity College, the National University, etc., and put forward the desirability of these Universities to establish a Diploma in Psychiatry as part of their educational curriculum.

A hearty vote of thanks to Dr. Considine for his kindness in entertaining the Division and for his hospitality was proposed by Dr. M. J. Nolan and carried by acclamation. This terminated the proceedings.

WOHLGEMUTH AND HIS REVIEWERS.

THE REPUTATION OF PSYCHO-ANALYSIS.

From the numerous reviews of my book (*A. Wohlgemuth: A Critical Examination of Psycho-Analysis*, London, 1923 [Allen & Unwin, Ltd.]), it seems to be evident that I have not made myself sufficiently clear with respect to the "Unconscious." Most of my critics appear to think that my main argument is directed against the existence of the "unconscious" and all the rest is "mere garnishing." This is not the case. In the same measure as the "New Psychology" rests not so much upon the assumed existence of an "unconscious," for this is of much older date than Freud, but upon the alleged discovery of the means to penetrate into it, to gain access to it, so is my chief argument directed against these pretended means, *i.e.*, against psycho-analysis.

The question of the "unconscious" is more of philosophical interest than of psychological importance. In psychology the assumption of an "unconscious" is quite unnecessary, since all known accredited phenomena can be more satisfactorily accounted for without it. I therefore still hold that an "unconscious psychic process" is a contradiction in terms, for a psychic process is, by definition, a conscious process. Countless nervous processes are happening every moment in the brain; the very existence of the life of the organism depends upon them. But only, and only then, if the nervous processes result in, or are accompanied by, consciousness are they psychic, otherwise they are physiological. Several critics have asked, what becomes of the idea, or thought, when it ceases to be conscious? The answer is very simple: There is no thought or idea; it ceases to exist with the cessation of the process. A lighthouse sends out flashes of light

at certain intervals, but these flashes are not the same flashes, however similar one to another they may be. In the interval between two flashes there is no flash. Thus it is with an idea; with the cessation of the psychic process there is no idea, although there exists a neurone disposition to similar processes, as there is a lighthouse disposition to similar flashes. In my view the conception of the "unconscious" is the outcome of anthropomorphic tendencies with regard to the inner world, as the creation of ghosts, spirits and deities is the outcome of similar tendencies with regard to the outer world. Only if thoughts and ideas, etc., are conceived as entities can an unconscious existence be predicated of them.

Apart from the "unconscious," most, if not all of the reviewers seem to admit, as Dr. Hy. Devine, writing in the *British Medical Journal* expresses it, that my "criticisms are damaging to some of the vital doctrines of psycho-analysis, and would certainly seem to demand a reasoned reply from the exponents of Freud's teaching." I may therefore fairly assume that Mr. J. C. Flügel's "Critical Notice" (*British Journal of Medical Psychology*, April, 1924) is intended to be such a reply, which assumption is certainly confirmed by the high scientific reputation which he deservedly enjoys. No better champion, in my view, could have been chosen, for there is no doubt of Mr. Flügel's thorough scientific training, and his work in experimental psychology is evidence of his ability. Strange to say, both he and I have sat at the same master's feet at different times, yet in our views upon psycho-analysis we differ *toto calo*. Why? Is it because I am more critical than he? Is it because he has been psycho-analysed and I have not? I cannot say. This, however, I can here repeat: My mind was quite unbiassed when, as an experimental psychologist, I began to study psycho-analysis, and although that doctrine appears to me now as quite untenable, I still preserve a perfectly open mind, and if a scientifically plausible hypothesis should be put forward I shall openly repent in sackcloth and ashes. Flügel, however, has not put forward such a hypothesis, nor has he, in my view, answered my criticisms. But that is really not his fault; it is the forlornness of the cause he endeavours to defend.

Flügel says that I differ from most other critics of psycho-analysis in that I am whole-hearted in my condemnation. The reason appears to me very simple. The critics to whom Flügel refers probably object to the fantastic results of psycho-analysis, or are outraged by the "oedipus complex" and so forth. They have not been able to discover the fundamental fallacy, and therefore, being possibly also of a mystical disposition, conclude that probably there is "something in it," but that psycho-analysts have overshot the mark. Now such considerations do not weigh with me in the least. My scientific training has been and the resulting mental disposition is such that I dispassionately search for truth which I am prepared to treat absolutely objectively. However unpalatable it may be—and I have in my career adapted myself to more than one unpalatable truth—it will always remain the truth in spite of all denials. "*Eppur si muove*." My wanderings in the psycho-analytic wilderness I have sketched in my book and need not repeat the story here. When I became at last suspicious I began all over again in a more critical mood, and I would advise Flügel to do the same, for, as I know him, I believe him to be imbued with the same love for truth as myself. Slowly step by step I went again through Freud's writings, especially the '*Traumdeutung*,' which appeared to me to be the gospel of psycho-analysis, halting at, and noting carefully, every point, and then, as I went on, I became simply dumbfounded at Freud's assurance. This sudden awakening, which came quite as a shock to me and made me ashamed of my previous superficiality, may possibly account for the vigour with which I have endeavoured to expose psycho-analysis. I would strongly advise all those who have a desire to know the truth with respect to psycho-analysis to take down again the '*Traumdeutung*' from their library shelf and not to hurry over it. It will be well worth their while to study it slowly and take nothing for granted. The result will be the same, I have no doubt, as in my case, for, emphatically, there is no proof, and the inquirer's energy might then be diverted from a pseudo-science and again directed into useful channels towards the advancement of knowledge and truth.

Referring to my "chief and constantly reiterated complaint" that in the writings of Freud I can find only assertions and never any proofs, Flügel regrets that I do not indicate more clearly what I would regard as a valid proof of the contentions of psycho-analysts. This is rather a surprising remark, coming from an experimental psychologist of Flügel's experience and reputation. My answer is that I

would regard as proof any experiment the result of which can be confirmed by a control experiment. To illustrate what I mean I may remind Flügel of an investigation of mine in which he kindly assisted me as observer. In a research on "associations" my observers had to learn series and pairs of nonsense-syllables as well as series and pairs of diagrams. When the observers were then examined I found that with regard to the syllables the results of previous workers were confirmed, *vis.*, a given syllable in a series called up rather the succeeding syllable than the preceding one; the first member of a pair called up the second member much more easily than *vice versa*. With regard to the diagrams no such difference existed; the associations were of equal value in both directions. I accounted for this extraordinary difference by the interference of motor memory in the case of the syllables, and formulated a hypothesis of physiological and psychological memories respectively. But this explanation of mine required confirmation in order to be of value. I argued that if I could eliminate the motor image and thus exclude the motor memory when learning syllables, then these ought to behave just like the diagrams, and this is exactly what they did do on performing the control experiment (*vide* my paper "On Memory and the Direction of Associations," *Brit. Journ. of Psychology*, 1913, v, pp. 447 *seq.*). Now Freud tells us—and this is the keystone of the psycho-analytic arch—that the dream is not what it appears to be, *vis.*, an unregulated phantasy, but the symbolic representation of latent unconscious thoughts which are quite unlike the manifest dream-contents. This, everyone must admit, is nothing but an assertion, and unless we can arrive from the manifest dream-content to the latent dream-thoughts it is valueless besides. However, Freud says we *can* discover these latent dream-thoughts, and describes a technique which we know as "psycho-analysis." The dream is thus interpreted, and we are presented with a picture, the latent dream-thought, quite unlike the actual dream. But the interpretation does not carry, of itself, any conviction in spite of the five reasons that Freud adduces in support. There is, however, one of these reasons, and in fact the most important one, which admits of a control experiment, similar to that in my research referred to above. This reason given by Freud is—"The improbability that the interpretation of the dream which so completely covers and explains and fits into the life of the subject could be obtained otherwise than by tracing back previously established associations." Now this assumption, for it is nothing else—ought to have been tested by a control experiment, and strange to say, such a control experiment has been performed, unwittingly, by the psycho-analysts themselves over and over again in analysing fictitious dreams, and it has also been performed by me in analysing Pharaoh's dream with the intention, and for the purpose, of testing the psycho-analytic theory. It has proved the untenability of the Freudian contention. The psycho-analytic case would have been proved, or at least rendered very probable, if an interpretation that covered and explained and fitted into the life of this subject could have been obtained *only* when the subject himself had dreamed the dream. As it is, the control experiment sweeps the ground away from under the feet of the psycho-analysts. But I shall revert to this again later.

Next Flügel complains that I have not thought it worth my while to read Freud's *Introductory Lectures to Psycho-Analysis* and nearly all the more recent contributions to psycho-analysis. It has evidently escaped his observation that I have quoted from the *Introductory Lectures*; but apart from this I have declared openly, and I do so again, that I shall not read any more about psycho-analysis unless, or until, a sound scientific basis has been given to it. All that has grown out of it is mere vapouring and froth, a pseudo-science that is not only useless, but actually harmful in two directions, first to those to whom it is applied, and secondly to those who apply it, since it keeps their energy and intelligence away from real good sound scientific research. I have made a thorough study of the earlier and foundation-laying writings of Freud, probably more thorough and in a more critical mood than my otherwise much respected and valued critic, or he would probably not be a psycho-analyst to-day.

"It is admitted that conviction is most easily obtained," writes Flügel, "by carrying out analyses in the capacity, first of 'analysand,' and then of analyst. But conviction obtained in such a way is, Dr. Wohlgemuth maintains, quite worthless, as by the time assurance is reached the investigator has been subject to a long and subtle process of suggestion." This contention Flügel apparently does not controvert. He continues: "There is, of course, as Freud points out, the alternate

method of auto-analysis. Dr. Wohlgemuth has tried this method, and gives us some of his results largely, it would seem, with a view to producing the effect of a *reductio ad absurdum*. . . . In the first place it would seem pretty clear that the motive of discrediting psycho-analysis was a factor in Dr. Wohlgemuth's mind at the time of undertaking the analysis. . . . Secondly, it is evident that . . . Dr. Wohlgemuth has often failed to abandon the conscious control of his thoughts, and furthermore failed to distinguish the results obtained under conscious guidance from those obtained by free association in the psycho-analytic sense. This is strikingly the case in dealing with Silberer's treatment of symbolism in folk tales." To Silberer I shall revert presently, but let me deal first with my analysis of the Pharaoh dream. It is certainly not correct to say that the analysis was undertaken with a view to producing the effect of a *reductio ad absurdum*. The analysis was begun as a genuine control experiment by free association. I generally started with the beginning of Pharaoh's dream, and, according to the associations running in different directions at different times, I might have had as many as a dozen different interpretations. Whilst I was impressed by the ease with which I could generally arrive at a meaning of the first part, I found that the second part of that dream was never quite so easy. I do not know why, but the day I came to the kinema manager I experienced a quite uncanny emotion which, had I been of a mystical disposition, would have certainly unsettled me. When, then, later the idea struck me of seeing whether I could not find my name indicated somehow in the dream, I admit frankly that I sat down with the avowed purpose of looking for it, exactly in the same way as Freud does to "analyse" numbers, to show that the "unconscious" prompted him in the composition of the numbers. To say, then, that I started out with the idea of ridiculing psycho-analysis is not correct; that it was thus ridiculed followed as a matter of course.

I now revert to Silberer's folk-tale analysis. Flügel writes: "Dr. Wohlgemuth has often failed to distinguish the results obtained under conscious guidance from those obtained by free association in the psycho-analytic sense. This is strikingly the case in dealing with Silberer's treatment of symbolism of folk-tales. After criticizing Silberer's 'analytic' and 'anagogic' interpretations he himself contributes two further . . . interpretations of his own, the 'oneirocritic' and the 'creopolic' interpretations." Here follows a quotation from p. 193 of my book, wherein I advise my reader suffering from *ennui* to try a "cricketecritic," etc., interpretation, promising him pleasure from the ease with which it can be done. I tell the reader that "he may be sure it is correct, for are we not told over and over again that such a solution is a proof in itself of its correctness, and that such an agreement cannot be due to chance." Upon this sarcasm Flügel comments: "The last sentence shows clearly enough that he (i.e., I) has failed to keep in mind the above-mentioned all-important distinction between 'free' and 'consciously-controlled' associations." Of course I have done nothing of the sort. Of course the "oneirocritic," the "creopolic," the "cricketecritic" interpretations are all "controlled," and so are the "analytic" and "anagogic" of Silberer and Hitchcock. Silberer sat down to interpret the folk-tale in a psycho-analytic sense. Hitchcock sat down to interpret it in an "anagogic" sense, and I did the same in a "creopolic" sense. Flügel might sit down and interpret Hamlet in a "psycho-analytic" sense and I in a "methustikian"; we should probably both get something intelligible, but he would be a rash man who expected anything useful. If one were to try by free associations to interpret a folk-tale every would-be interpreter would get a different result, and the same interpreter different results at different times. Further, these results would have nothing in common with the reasons or causes that originally gave rise to the tale.

"Another feature of my analytic methods," writes Flügel, "is also familiar to analysts through clinical experience, namely the desire on the part of the patients to exchange rôles and turn the tables on the analyst by becoming far more interested in the personality of the latter than in their own concerns." This has reference to my advice to my readers to have no hesitation in telling their dreams; the interpretation would afford a sure indication to the type of mind of the interpreter. Now, I hope Flügel will excuse my saying that he is only repeating once more one of those threadbare psycho-analytic confidence tricks, like that about "resistance," which have now lost their force, if they ever had any. This remark of mine, like my completing of Freud's dictum, "Dream analysis is the *via regia* to

the 'unconscious,' by adding "of the psycho-analyst," was prompted by purely objective considerations. If a dream of mine were analysed by Freud he would doubtless unearth some sexual complex, whilst Jung, with the same dream, would discover some "prospective and teleological function," and Adler would find the "will to power, the masculine protest." This, I think, is sufficient proof that the result is due to the psycho-analyst and that the dream-interpretation is the *via regia* to the analyst's "unconscious." Besides, Freud, in an unguarded moment, has admitted as much himself. Here, once more, are Freud's own words: "DURING THE ANALYSIS . . . IDEAS HAVE TO BE SUGGESTED TO HIM (the patient) WHICH HAVE NOT AS YET OCCURRED TO HIM; HIS ATTENTION HAS TO BE ADJUSTED IN THOSE DIRECTIONS FROM WHICH (the psycho-analyst) ANTICIPATED THAT WHICH WAS TO COME. . . . BUT IN EVERY ANALYSIS ONE HAS TO PROCEED LIKE THIS. A PSYCHO-ANALYSIS IS NOT AN UNBIASSED SCIENTIFIC RESEARCH, BUT JUST A THERAPEUTIC INTERVENTION. THE PHYSICIAN GIVES IN PSYCHO-ANALYSIS EVERY TIME TO THE PATIENT THE RESPECTIVE EXPECTATION IDEAS BY MEANS OF WHICH HE (the patient) SHALL BE ENABLED TO RECOGNIZE THAT WHICH IS UNCONSCIOUS AND TO SEIZE IT. . . . WITHOUT SUCH HELP NO ONE CAN GET ON." Can there be a more emphatic justification for my modification of Freud's dictum than what is here admitted in Freud's own words?

I come next to the question of the "unconscious." Flügel writes: "The root of Dr. Wohlgemuth's unwillingness to see anything of value whatsoever in psycho-analysis lies, it would seem . . . in his inability to understand or use the concept of the 'unconscious.'" First of all let me point out that there is no question of "*unwillingness* to see anything of value whatsoever in psycho-analysis" on my part, but nothing except sheer inability. In using this term with respect to me, Flügel's "unconscious" must have played him a trick. It imputes to its possessor's antagonist the "unwillingness" to be convinced, whilst it itself is swayed by the "will to believe." Next I wish to point out that Flügel is mistaken in considering my refusal to see anything of value in psycho-analysis has its root in my inability to understand or use the concept of the "unconscious." If this had been the case I could never have taken favourably to psycho-analysis as I did at first. Whilst still holding my view that the conception of an unconscious mind, if taken to mean more than a figure of speech, is not only self-contradictory, but also unscientific and unnecessary, its denial or acceptance does not materially affect the validity of my criticism of psycho-analysis. From my point of view it is only of academic interest, and we need not dissipate our energies by unduly enlarging this discussion. Personally I am quite prepared and desirous of discussing the "unconscious" apart from psycho-analysis. For the "unconscious idea or thought" of the psycho-analyst we have only to substitute my "neurone-disposition," and much, I believe, would practically remain unaltered. But be this as it may, I am prepared, if only for the sake of argument, to grant to the psycho-analyst his "unconscious." Nevertheless the psycho-analytic doctrine remains, as I have proved (*proved* in the scientific, not in the Freudian sense) by my control experiments, futile and illusory. There is absolutely no adequate reason, beyond the desire to do so, to believe that the results obtained have anything to do with the alleged "unconscious." The "unconscious," then, is not the essential part of psycho-analysis. But the *technique* of penetrating into it, of interpreting it, of making it conscious, is the keystone to the psycho-analytic arch.

"Among the objections brought forward," says Flügel, "there are some which are very difficult to understand, inasmuch as they seem fairly to play into the hands of the enemy. Thus the following incidents, apparently quoted as evidence against psycho-analysis, seem to cry out for a psycho-analytic interpretation." I give the first of Flügel's quotations from my book because Flügel has left half of it out, and it has no sense in this mutilated condition.

"Quoting a line from Shelley's *Ædipus Tyrannus* [a friend] wrote: 'All is sealed up with the broad seal of Freud.' Turning up the passage I found that it ought to have been: 'All is sealed up with the broad seal of fraud.' Freud—*Ædipus*—Fraud? When I met my friend the following day, and drew his attention to the *lapsus calami*, he smiled, but declined to be psycho-analysed."

"With regard to these cases," Flügel sums up, "we are surely justified in quoting Dr. Wohlgemuth himself in another connection to the effect that 'comment is superfluous.' Of course it is. Can it be possible that Flügel has failed to realize

that, as the *Lancet* reviewer terms it, I am merely 'guying' the psycho-analysts, or is he in turn trying to 'pull my leg'?"

Next Flügel discusses my introspective experiments with reference to Freud's assertion that there are homosexual tendencies in all, even normal, human beings. As he rightly remarks, my argument does not touch the real point at issue, it does not disprove that such tendency exists in me unconsciously. But what reason is there that should prevent us from multiplying such unconscious tendencies. If there is an unconscious tendency in me to eat coke, and another to paint pillar-boxes blue, Flügel could not disprove their existence. But is that psychology? Yes, the "New Psychology"!

Coming to my chapter on symbolism Flügel writes: ". . . most of the chapter on symbolism is taken up in showing that symbols (particularly phallic symbols) may have other meanings than those stressed by psycho-analysts, and that these latter meanings may occur without the accompaniment of the corresponding symbols. Neither of these facts has ever been denied by psycho-analysts. . . ." In reply I refer my critic to the following passage of Ernest Jones (*Papers on Psycho-Analysis*, 1918, p. 143): "The idea of a snake, which is never consciously associated with that of the phallus, is regularly so in dreams, being one of the most constant and invariable symbols; in primitive religions the two ideas are quite obviously interchangeable, so that it is often hard to distinguish phallic from ophitic worship." I have no doubt that other passages from the same author could be found where such assertions are qualified and less sweeping, but these inconsistencies obtain with most psycho-analytic writers.

With reference to my criticism of the "censor," Flügel thinks that "there are possibly incautious or inexact expressions on the part of psycho-analytic writers," but that my strictures would "scarcely affect the underlying doctrine." Ernest Jones had defined the censor as "the sum total of repressing inhibitions," and Flügel further defines now the "inhibitions" as "active tendencies or wishes." I do not see how this can meet my criticism in the least. It is still beyond my understanding how "active tendencies or wishes," any more than a "sum total of repressing inhibitions," can manifest a greater intelligence than the individual in whom they are active, or how they can more effectively interpose doubt in the subject's mind, or how they can possess an *esprit d'escalier*. The fact remains simply this: Freud conceived his censor as an entity, somewhat after the style of Maxwell's demon, and makes him act and conduct himself accordingly. All the exegetics of Freudian apologists will not alter this fact, for all that which Freud predicates of his "censor" can only be affirmed of such a mystic entity, but not of a "sum total of repressing inhibitions," nor of "active tendencies or wishes."

Then follow some remarks charging me with endeavouring to obtain a dialectical advantage over Freud. I do not agree with Flügel. If it had been possible for the passage referred to to have emanated from Flügel's pen I would, convinced of his solid psychological knowledge, certainly have passed it over as an elliptical way of expression, but I have given so many other instances which betray the flimsiest superficial acquaintance of Freud with psychology, and which Flügel passes over in silence, that there is no reason to assume that Freud's knowledge in this particular case had a sounder foundation.

Flügel gives next an extract wherein I endeavour to show the absurdity of Freud's dictum that "the dream is the protector of sleep, not its interrupter," and comments as follows: "To this criticism the psycho-analyst will naturally reply that the assumption of the author's sleep *not* having been protected when it was dreamless or uninterrupted is an unproved one. . . ." Of course it is unproved; I frankly admit it; but what I do not admit is the psycho-analytic logic which implies that consequently Freud's assertion is correct. A better way out of the difficulty for the psycho-analyst would be to assert that *the dream I did not dream was an unconscious dream*, and therefore my sleep was still protected.

In the next paragraph Flügel tackles the difficult problem of "suggestion." It appears to me that he, too, often confounds the two meanings of the term, namely, the means employed to produce suggestion and the effect produced. Nevertheless the paragraph is worth reading carefully, for Flügel evidently realizes the quandary in which he finds himself, and from which he is unable to extricate himself. He says: "It is hard to convince a sceptic that the so-called results of psycho-analysis] are not put into the patient's head by the analysts." Of course it is quite impossible to convince anyone of this who has before him the

analysis of "Little Hans," and Freud's own admission that *no one can get on without telling the patient "many things which he himself does not know to say; ideas have to be suggested to him which have not as yet occurred to him; his attention has to be adjusted in those directions from which he (the psycho-analyst) anticipates that which is to come . . . but in every analysis one has to proceed like this. A psycho-analysis is not an unbiased scientific research, but just a therapeutic intervention. The physician gives in psycho-analysis every time to the patient the respective expectation-ideas by means of which he (the patient) shall be enabled to recognize that which is unconscious and to seize it. . . . Without such help no one can get on."* What is the use of arguing after this and saying to the critic, "You are unconversant with the intimate working of the analytic method and can therefore form no judgment." With the method itself one can become thoroughly conversant from the study of the literature, but to be conversant with its "intimate working" one has to be psycho-analysed, and to be effectually psycho-analysed one must believe in it; hence unless one believes in the intimate working of psycho-analysis one can form no judgment, and must not criticize psycho-analysis. Was there ever such a travesty of scientific reasoning?

Flügel proceeds to argue that since demented and paranoiacs are free from suggestibility and some have been analysed by psycho-analysis, "a careful examination of the psycho-analytic findings in these cases should therefore be one of the chief points of attack by those who maintain that the discoveries claimed by psycho-analysts are really only artefacts due to suggestion. Such an examination is unfortunately not undertaken in the present work." Now while it is difficult to obtain hypnosis in the cases of demented and paranoiacs, it does not follow that they are proof against the more subtle form of suggestion as is operative in psycho-analysis. Moreover, the results are the interpretations of psycho-analysts, and would be of the same kind as those they get by the study of mythology and folklore, which is the next bastion which Flügel tries to hold. This, however, I have already undermined above when answering Flügel's strictures on my comments on Silberer's analytic and Hitchcock's anagogic interpretations.

A valuable confirmation of my contention that suggestion is the therapeutic agent active in psycho-analytic treatment has been supplied by Dr. W. H. B. Stoddart. In a correspondence in the *Lancet* on "Vertigo and Seasickness," Dr. Stoddart had attributed the latter to infantile complexes, the rolling sea reminding the patient of the heaving of the mother's bosom, etc. Writing in the *Lancet* of June 14, 1924, Dr. Stoddart says: ". . . This explanation of seasickness will never cure the patient suffering from it. To be effective he must discover the explanation for himself out of his own mind. Otherwise he will simply refuse to believe it." We may reasonably assume, since, as Freud tells us, "without such help no one can get on," that Dr. Stoddart, to enable his patient to "discover the explanation for himself out of his own mind," just gives him the "respective expectation-ideas by means of which, as Freud says, he shall be able to recognize that which is unconscious and to seize it." But what is so helpful in this controversy, as helpful almost as Freud's "Gradiva" analyses, is Dr. Stoddart's statement that "otherwise he [the patient] will refuse to believe it." Evidently, then, the *believing* is the indispensable prerequisite to the cure—that is, EFFECTIVE SUGGESTION. Exactly what I have been contending all along the line; the therapeutic factor in psycho-analysis is *suggestion* pure and simple.

Flügel then reverts to Freud's *Gradiva* analysis, which I look upon as, what in fact it is, a control experiment, and in turn is shocked at my perversion. "But surely," he says, "it is permissible to apply explanations that have been obtained from cases with full data—in this case free associations—to other cases where the data are incomplete, with a view to seeing how far these explanations will work with the limited data available. Such process is carried out constantly both in every-day matters and in science, particularly in comparative science." Flügel imagines, then, a certain objection I would make and proceeds to demolish it. As it is, however, my objection is quite different. It is this: Just now Flügel tried to shore up the tottering structure of dream-analysis by the analytic results from mythology and folk-lore, etc., and now he endeavours to underpin these analyses with the results of dream-analysis—an example of *petitio principii* good enough for a text-book on logic. Besides, where are the results obtained by "free associations," when Freud himself, as quoted above, states that no one can get on unless he gives "every time to the patient the respective expectation-ideas"? The day

Freud published his Gradiwa analysis he committed psycho-analytic suicide; when he published the analysis of "Little Hans" he put the last screw into the psycho-analytic coffin, and with the above-quoted apology he gave that screw the last turn.

In the next paragraph Flügel tries exactly the same process with reference to "suggestion" and "transference," which therefore need not detain me.

With regard to my demonstration that the nature of the feeling-tone, whether pleasure or unpleasure, has no influence upon memory, Flügel admits: "This seems to be in genuine contradiction to the views held by psycho-analysts," *vis.*, that unpleasant experiences are more easily forgotten than pleasant ones. As to his remarks respecting my want of appreciation of Whately Smith's experiments I have no reason to modify this, especially after the admirable "Note on the Psychological Significance of the Psycho-Galvanic Reaction" by Honoria M. Wells, published since in the *Brit. Journ. of Psych.*, General Section, vol. xiv, p. 300.

In the next paragraph Flügel frankly admits the necessity of control experiments in such matters as the analysis of numbers. This, of course, Freud ought to have done *before* he ventured to bring his fantastic theories before the public, and would have done, if he had had any idea of scientific method. Incidentally Flügel repeats his charge of my neglecting to distinguish between free and controlled associations, which charge I have already refuted above. Freud, after writing down a number, sat down with the set purpose of finding some relation of the variously arranged digits to his past experiences, and I did exactly the same with Freud's own numbers with similar results. These experiments of Freud's, like his examples of forgetting, slips of the tongue, slips of the pen, symptomatic actions, errors and so on were intended to confirm his assertions about the action of the "unconscious." In admitting my criticism of the former and ignoring that of all the latter, the whole of Freud's "*Zur Psychopathologie des Alltagslebens*," and all that has grown out of it and aroused such an interest in psycho-analytic literature, becomes valueless.

I am truly sorry for having hurt my kind critic's feeling by speaking in the concluding sentences of my book of "the propaganda of the psycho-analysts in the press." I have no evidence of the psycho-analyst but only of the propaganda; so I ought to have spoken merely of "the psycho-analytic propaganda in the press."

Here finishes Flügel's criticism. It must, however, have struck the student who has read my book that Flügel omitted to refer to several matters that I had criticized rather severely. I have already referred to forgetting, slips of the tongue, slips of the pen, mistakes in spelling and reading, misplacing, etc. There are, further, Freud's frequent examples of reasoning by analogy, which are so potent a factor in impressing the superficial. But the most important, I think, is my exposure of Freud's "psychology." Not only did I tear his "schema of ψ systems," upon which the '*Traumdeutung*' depends, to tatters, but I showed also that it is quite unintelligible. In fact, it has occurred to me that Freud could never have written it himself, and that it might be the composition of one of his paranoiac patients. And if we consider Freud's propensity for puns and dubious jokes, as well as his delusions about himself with respect to Darwin and Copernicus, this would certainly be the more charitable view to take.

I am pleased to see that Flügel is convinced of my good intentions although my attack be "fierce." I assure him that I have the greatest respect and the friendliest feeling for all those psycho-analysts with whom I am personally acquainted. In fact, it is not the psycho-analysts that I attack, but psycho-analysis, and the "fierceness" of my criticism is merely a measure of my regret to see their great energy and undoubted ability wasted on the teachings of a shallow and superficial thinker. I would have my psychological and psycho-analytic friends swear the oath of Hippocrates, which future doctors at Montpellier used to swear until recently⁽¹⁾:

"I swear that, whatsoever my faith or lack of faith, it shall be of no account in my research.

"I swear to be disinterested, to hold myself aloof alike from polemics and propaganda.

"I swear to be honest, to omit nothing of what I see, to add nothing, to attenuate nothing, to exaggerate nothing.

"I swear to be respectful, not to mock at any belief of the past nor of the present.

"I swear to be courageous, to maintain my opinion fearlessly against any hostile belief that refuses to tolerate it.

"And I swear to renounce it the moment I see or am shown a convincing reason for doing so."

A. WOHLGEMUTH.

(¹) Quoted from P. L. Couchoud : *The Enigma of Jesus*. With an Introduction by Sir James Fraser. London : Watts & Co., 1924.

A ROYAL COMMISSION ON LUNACY LAW.

THE King has been pleased to approve the appointment of a Royal Commission with the following terms of reference :

(1) To inquire as regards England and Wales into the existing law and administrative machinery in connection with the certification, detention and care of persons who are or are alleged to be of unsound mind ;

(2) To consider as regards England and Wales the extent to which provision is or should be made for the treatment without certification of persons suffering from mental disorder ;

And to make recommendations.

The Commission will be composed as follows :

The Right Hon. H. P. Macmillan, K.C. (chairman), the Earl Russell, Lord Eustace Percy, M.P., Sir Thomas Hutchison, Bt., Sir Humphry Rolleston, K.C.B., M.D., D.C.L., LL.D., Sir Ernest Hiley, K.B.E., Sir David Drummond, C.B.E., M.D., D.C.L., Mr. W. A. Jowitt, K.C., M.P., Mr. F. D. MacKinnon, K.C., Mr. H. Snell, M.P., Mrs. C. J. Matthew, Miss Madeline Symons, with Mr. P. Barter, of the Ministry of Health, as Secretary.

All communications regarding the Commission should be addressed to "The Secretary, Royal Commission on Lunacy and Mental Disorder, Ministry of Health, Whitehall, S.W. 1."

Applications to give evidence before the Commission should be made in writing ; personal interviews cannot be granted in this connection.

OBITUARY.

RICHARD HENRY HEURTLEY SANKEY, M.R.C.S., L.S.A.

The *doyen* of our Association died on May 13, 1921, at the age of 90. He was appointed Assistant Medical Officer to Dr. Leigh at Littlemore Asylum (Oxford and Berks County Asylum) in 1854. After serving as Assistant Medical Officer for seven years he was appointed Medical Superintendent. This post he held until he retired in 1906, after 52 years' service. He retained his faculties until the end of his life. His sight, hearing and memory were very good. He was always bright and cheerful and never depressed. He married in 1869 and had one son and two daughters. His wife died in March, 1914.

ALBERT IRWIN EADES, L.R.C.P.&S.Irel., Medical Superintendent, North Riding Mental Hospital.

THE tragic death of Dr. Albert Irwin Eades on Easter Monday caused widespread distress amongst all who knew him.

Eades was a man who required knowing.

A first impression was apt to be that of a cold, austere person, entirely self-sufficient, whereas this was very far removed from the true nature of the man. He was warm-hearted, generous to a degree, and possessed a store of dry humour which made him a most entertaining companion.

He was essentially a man's man, and enjoyed nothing better than a quiet evening round the fire with a friend and a pipe, and if that friend were in his specialty, so much the better, for he was entirely bound up in his work, and never wearied of discussing ways and means of improving the lot of his patients.

He was a shrewd judge of character, and his reminiscences of the various colleagues he had served with in the course of his career at Nottingham, Prestwich

and Winwick were always intensely interesting and often very amusing. He was a man of unbounded energy. Up at 7 a.m., he saw all his heads of departments before he breakfasted, and much that he might with advantage to himself have delegated to others he carried out himself.

He was loved by his patients and had a most intimate knowledge of everyone under his care—one had only to walk round the wards with him to perceive both these facts.

Albert Irwin Eades was born on June 21, 1873, in the town of Sligo. His father was W. C. Eades, M.A., a distinguished classical scholar who entered the Indian Civil Service, but was invalided in 1866, although he lived till 1919.

Dr. Eades was educated at the Diocesan Schools of Sligo and Elphin, co. Roscommon, both of which were then presided over by his father. Eades showed the same aptitude for the classics as his father, and won many prizes.

In 1892 he entered the Royal College of Surgeons, Dublin, and obtained the Licence in 1897, after a distinguished career, being awarded the Mayne Scholarship, which is the blue riband of the College.

Most of his professional life has been spent in mental work, and he served in various asylums until, in the year 1905, he succeeded Dr. Hingston as Superintendent of the North Riding Mental Hospital.

He had not been in robust health for some time: the strain of the war years told severely on one of his temperaments. Last autumn he was much debilitated by a succession of large boils, and there can be little doubt that the Harnett case in his run-down state preyed on his mind to a morbid degree.

The love and esteem in which he was held was given eloquent testimony to by the large attendance at the moving funeral service in the Hospital Chapel on the day of his burial.

Committee, staff, patients, and the local members of the medical profession were present in large numbers. Of our own specialty there were present Prof. Shaw Bolton, Dr. Brunton of Nottingham, his former Senior Assistant, Dr. Rutherford Jeffrey, Dr. Mackenzie, Dr. Simpson, Dr. Yellowlees, and had it not unfortunately been the occasion of the Divisional Meeting of the M.P.A. at Prestwich, many others would doubtless have paid their last tribute.

Eades had no very near relations to mourn his loss and he was a bachelor, but he will be greatly missed in the sphere in which he laboured so successfully, as is shown by the resolution which his committee have placed on record and which I repeat in full:

"The Visiting Committee of the North Riding of Yorkshire Mental Hospital desire to express their profound grief and regret for the death of Dr. Albert Irwin Eades, their Medical Superintendent, and to record their high appreciation of his work for nineteen years past, during which, by his unrivalled medical skill, conspicuous administrative ability, and, above all, his intensely conscientious devotion to duty, he raised the Hospital to the highest standard of efficiency, both in the care and treatment of patients and in the administration of its finances. They further wish to offer to his relatives their deepest sympathy in their loss and sorrow."

E. S. SIMPSON.

CORRESPONDENCE.

To the Editors of the JOURNAL OF MENTAL SCIENCE.

I have only just received from Messrs. Longmans the review of my *Applied Philosophy*, and I should like to write a line to the writer. Being signed gives it a personal touch and adds interest to it, as obviously we are both discussing a subject which appeals to us both. If we met in person I think we should agree—if only to differ.

With much that he says I am not going to quarrel. The fact is, it should have been written at the beginning instead of the end of life—only I don't think I thus saw things at the beginning of life. The thought wants working out and it wants years to do it. But evidently I have not made clear what my central thought is. It is not to demonstrate the truism, as stated, but to urge that this truism should

be realized and made the basis of judgment in all our affairs of life. Now can Mr. Hockly recall—I cannot—any human movement, modern, medieval or ancient, which has thus been measured? I have read tons—so probably has he—of writing in praise or dispraise of this philosophy or this line of action, but can he give me instance of one writer who has judged any political party or religious sect in this dual method?

E.g., how do we judge the present labour *régime*? In amazing fashion they have proved that with views some consider disastrous they can combine conduct as sensible as if dictated by Bentham himself.

If you measure them by their philosophy alone, as so many do, you sum them up—well, depends on your party. If you measure them by their conduct alone you may go to the other extreme, and may give them a lease of power which you may or may not regret.

My book is not a defence or elaboration of the truism, but rather an appeal that we may take it as the basis of our judgment when dealing with human affairs in general.

Judging the individual we are thus influenced: We often vote a man a good fellow though we think his opinion rotten, also *vice versa*, but we do not thus judge movements in the aggregate. We are usually carried away by window-dressing.

Perhaps I do not make myself clear here, as I am afraid I must have failed to do in my book, but can't you see the difference between stating a truism and advocating that such truism shall be made the basis of our critical analyses?

I once took as the basis of an economic subject a similar truism: "It is not work we want." "Oh," said everyone who read it, "We don't want work? Well, I do." "Not so," my reply, "It is not work we want. It is—the *profit* of our work." "Of course! Of course! That is so," in chorus in reply; but there is no "of course" about it.

At the time all our economics were based on wanting work and increasing work.

Whilst this truism (?) taught it was an entirely different matter we had to consider how to increase our profit and not our work, so here I don't write to demonstrate a truism, but to advocate its reduction to practice—not quite the same thing.

And is not this wanted? And if your reviewer can give me one case even to study where this has been done, I shall read it with the greatest interest and be greatly obliged.

Yours truly,

C. Y. C. DAWBARN.

12, Adelaide Terrace,
Waterloo, nr. Liverpool;
May 10, 1924.

[Mr. Dawbarn's letter of protest to the Editor of this Journal with regard to a review of his book, *Applied Philosophy*, in the issue of January, is so courteous in tone that the reviewer feels it incumbent on him, though contrary to usual practice, to reply briefly to some of the points raised in that letter. But he greatly regrets that he cannot temper his criticism even after another perusal of the book, and his judgment has been fully endorsed by several competent scholars whose opinion he sought.

The author's object—"to urge that the truism in question should be realized and made the basis of judgment in all affairs of life"—cannot be traced in the book, even after the explanation of the letter. If this object had been made clear, the review of which Mr. Dawbarn complains would not have been so adversely critical, and would have emphasized the advocacy. The intended line of argument, however, is completely hidden.

Equally mysterious is the treatment of the subject, "Applied Philosophy." No enunciation is made of the tenets of any one of the many variant systems of philosophy, indicative of the author's standpoint. The title, "Applied Philosophy" demands primarily, in a treatise on this theme, a definite statement of the philosophy favoured, otherwise it is obviously impossible to "apply" it. An attempt to show how the laws of any science may be used effectively must be preceded by a synopsis of those laws, if the work is not to be as futile as a sign-post without any words of direction on it. The writer's philosophical position is left a matter of conjecture (most probably a sort of Neo-Hegelianism), and on guess-work foundations a satisfactory superstructure can never be reared.

The challenge to name any writer who is an advocate of the government of life by philosophy is easily answered. If there be an absence of such teaching—and this point cannot be settled by a sweeping generalization in view of the infinite issue of works on ethics, economics, politics, psychology, the practical parts of philosophy, nor solely with regard to the more abstruse parts, ontology, cosmology, theodicy, metaphysics, heights which soar beyond the range of human conduct, almost beyond the power of human thought—this absence is owing to the fact that the inculcation of this doctrine is unnecessary, because man naturally bases his mode of living on a philosophy. Man is called "the rational animal," *i.e.*, "a philosopher." Instinctively he asks "Why?" and "How?" and "What?" with an intention to practical result, and then guides his actions according to the system of philosophy which he individually forms from the answers to these questions, aided perhaps by the teachings of the mighty thinkers of old, whose very names he may not know, but whose speculations have been sorted, sifted, and finally adopted by the great aggregate of the human mind, and now, a common heritage, are enwrapt in common thought. So it is that every man has a philosophy of the things which lie within the sphere of his experience, although vulgarly he names it "common sense," and uses it to guide his conduct.

The illustration derived from the Labour Party is decidedly inappropriate, for that Party has a very clear-cut political philosophy, but is hindered from bringing its principles into effect by another philosophy more largely held. Expediency and enforced submission to the conventional have, times without number, been the invincible opponents to the practice of many a system of philosophy.

Lastly, as to the query whether the ethics of Christ cannot be viewed apart from His religion—they *can*, but so, their influence is usually slight: they serve only to dishearten and repel. Very probably the present low standard of Christian living is due to this attitude. Unless they are regarded as the standard set by the Divine Master, as the Divine Code of Laws imposed on men, they become "counsels of perfection"—an altitude of life too lofty and sublime for attainment, not really to be expected. They require the Divine imprimatur to urge men to adopt them, and the consequence of the Divine help to perform them. E. J. H.

NOTICES OF MEETINGS.

Annual General Meeting.—July 1-5, 1924, at Belfast and Downpatrick.

Quarterly Meetings.—November 20, 1924; February 19, 1925; May 21, 1925.

South-Western Division.—October 23, 1924; April 23, 1925.

Irish Division.—November 6, 1924; April 23, 1925; July 2, 1925.

APPOINTMENTS.

COBB, G. F., M.R.C.S., L.R.C.P., D.P.M., Senior Assistant Medical Officer, County Mental Hospital, Burntwood, Lichfield.

REID, WILLIAM, M.A., M.B., Ch.B., Medical Superintendent, County Mental Hospital, Burntwood, Lichfield.

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EDITORS

J. R. Lord, C.B.E., M.B. Henry Devine, O.B.E., M.D.
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The following Mental Hospital Reports for 1923-24 have been received :

Carmarthen County.
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Stafford County.
The Retreat, York.

Also the following Reports and Reprints :

Margismus, by *Dr. J. Bresler*.
The Influence of Intestinal Toxæmia on Functional Mental Disease, by *Dr. J. T. Ainslie Walker*.
Annual Report, Protestant Hospital, Verdun, Montreal, Quebec, 1923.
Sixty-fifth Annual Report, Royal Eastern Counties' Institution for the Mentally Defective, 1923.
Boletín de la Dirección de Salubridad Pública, Peru, 1924.
The Relation of Oral Sepsis to Nervous Breakdown, by *Dr. T. C. Graves*.
First Report, National Council for Mental Hygiene, 1923-24.
Observations on Exhibitionism, by *Dr. W. Norwood East*.
The Importance of Mental Factors in the Life of the Community, by *Dr. H. Head*.
Annual Medical Report, Federated Malay States, 1923.
Addresses to Magistrates on Legal Responsibility, etc., by *Sir Leslie Scott, K.C.M.G.*, March, 1924.
Report on Dietaries in Mental Hospitals (England and Wales) : Board of Control, 1924.

Books for Review :

An Introduction to the Study of the Mind, by *Dr. William A. White*.
Mind and Medicine, by *Dr. Thomas W. Salmon*.

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VOL. LXX.

Part I.—Original Articles.

Some Considerations on the Present-day Knowledge of Psychiatry, and its Application to those under Care in Public Institutions for the Insane.⁽¹⁾ The Presidential Address at the 83rd Annual Meeting of the Medico-Psychological Association of Great Britain and Ireland, held at Belfast, on July 2-5, 1924, by Dr. M. J. NOLAN, Resident Medical Superintendent, Down District Asylum, Consulting Visitor in Lunacy to the Lord Chief Justices of Northern and Southern Ireland.

THERE is great difficulty in finding a novel theme as the subject of an address to the members of an Association which rejoices in the maturity of its eighty-third year of existence. Still greater is the difficulty in finding a subject of common interest having regard to the varied branches of work covered by their labours, ranging as they do from the busy routine of a crowded day to the silent special research in the laboratory. And the greatest difficulty of all lies in the fact that in each of these fields of work there are many present who have had vastly wider opportunities than I have had, and who could treat their chosen subject with infinitely more skill in thought and language than I can command. Since, however, you have been good enough to give me the opportunity of addressing you I feel you will be no less generous in pardoning my shortcomings on this occasion.

I have taken to heart the advice of the Sage of Chelsea, who has said, "If you do speak, speak upon that subject of which you think you know something, and be mindful to speak briefly." My subject is some considerations on the present-day knowledge of psychiatry, and its application to those under care in public institutions for the insane. Of these matters I hope I know something, and that something I shall endeavour to express as briefly and as lucidly as time will permit.

⁽¹⁾ Delivered at Queen's College, Belfast, July 2, 1924.

May I premise by stating that the insanity I refer to to-day is covered by that degree of mental disturbance which necessitates the curtailment of the personal liberty of the persons affected, not only in their own interest, but in the interest of the community at large—I take no account of academic distinctions of disordered mentality, passing over *idiots savants*, erratic geniuses, *et hoc genus omne*.

The asylum physicians engaged in the care and treatment of these ready-made lunatics are hourly faced with problems in psycho-pathology, and are obliged to seek a basis for the morbid mental phenomena displayed by their patients. The crude basis is found, more or less, to the satisfaction of the observer, in physiogenic or psychogenic causes according as he is biased himself towards a materialistic or a metaphysical view-point. Some physicians there are—and I include myself in the number—who, not finding satisfaction in one or other of these groups, are inclined to seek the solution in a combination of physical and psychical conditions. This position is a rock of refuge from the maelstrom of speculation which seems at the present time to whirl to destruction those who seek in its unfathomable waters what they have abandoned on the *terra firma* of objective fact. They seek a solely material or a solely mental basis of intellectual failure, when a reasonably obvious combination of both better explains the origin in a reasonably evident manner, as in most cases there is a clearly defined vicious circle of cause and effect—mental and bodily. The difficulty that strikes one is that a given number of persons are affected by some particular bodily disease, and show no mental abnormality; a given number are affected by mental abnormality and exhibit no obvious bodily disease. If, however, we find the same bodily disease in conjunction with mental abnormality, are we justified in determining the relationship as cause and effect? The answer would seem to be that when the removal of the bodily disease is followed by the lifting of the mental cloud, such a relationship may be fairly claimed, and inasmuch as a large proportion of cases run such a course, it is one's duty to assume that such a relationship does exist, and that we should give the patient the benefit of any doubt there may be on the point. In any event the nature of the relationship still presents the great riddle—an enigma so far unsolved, notwithstanding the fact that in the vast majority of cases the dual disorder exists. "There is no more common saying than *mens sana in corpore sano*," says Carlyle, "and nothing more difficult to achieve," and therefore it should be our highest ideal. A man all lucid and in equilibrium. His intellect a clear mirror, geometrically a plane, brilliantly sensitive to all objects and impressions

made on it; not twisted into convex or concave, and distorting everything, so that he cannot see the truth of the matter without endless groping and manipulation, healthy, clear, and free, and discerning truly all around him—we can never attain that at all." The deviations from it are also appallingly frequent. Here one may briefly consider the cause of these strange deviations running through all ages and nations.

Psychology, normal and abnormal, as exemplified in the Scriptures and the Classics, is so obviously identical in type with the examples we meet to-day that the fact is self-evident. Throughout the world's history there has been a continuity of fundamental mentality. "So far as we can judge," says Prof. Elliott Smith, "there has been no far-reaching and progressive modification of the instincts and emotions since man came into existence beyond the necessary innate power of using more the cerebral apparatus which he has to employ." Dean Inge, on the same subject, puts it that—"Apart from the accumulation of knowledge and experience there is no proof that man has changed much from the first stone age." In confirmation, Edward Clodd holds that—"In every department of human thought there is present evidence of primitive ideas. Scratch the epidermis of the civilized man and the barbarian is found in the derm. His civilization is the rare topmost part of the tree whose roots are in the earth, and whose trunk and larger branches are in savagery. Hence, although the study of anatomy and physiology—in other words of structure and of function—paved the way, no real advance in pathology was possible until the fundamental unity and interdependence of mind and body were made clear, the recency of which demonstration explains the persistency of barbaric theories of disease in civilized societies." But while the fundamental unity of mind has been preserved, the superstructure raised on it has infinite varieties of design, built up by "the accumulation of knowledge and experience." These later varieties are seen *en masse* in the framework of national character, and in finer details in individuals; acquired in the passage of time they are superimposed on inherited qualities. They have been determined by the repetition of the emotions most frequently called into play by the particular stimuli of the environment, as national conditions, be they good or bad, produce the mental operations which go to build up national characteristics. These latter are so strongly in contrast and so antagonistic that the incompatibility of the temperament of nations is no less accentuated than it is in individuals. As Lord Balfour asserts, "the flexible element in any society, that which is susceptible of progress or decadence, must therefore be looked for rather in the physical and

psychical affecting the life of its component units than in the inherited constitution. This last rather supplies a limit to variations than an element which does itself vary, though from this point of view its importance is capital. I at least find it impossible to believe that any attempt made to provide widely different races with an identical environment—political, religious, educational, what you will—can ever make them alike. They have been different since history began; different they are destined to remain through future periods of comparable duration."

It is evident, then, that the so-called normal mind is one of time and place, as it is subject to laws of relativity of period and locality, and any deviation from it is regarded as mental aberration. At all times this deviation is evolved slowly in individuals, but at critical periods in history an impetus gives it more rapid movement. The aftermath of war is a hot-bed for very quick development, as at the present time, when there is an extraordinary effort to shift the shackles of convention in all grades of society. The result is a levelling up and down gives rise to an altered level of convention that merges the characteristics of the old social grades, and prepares the way for a still further adjustment in the future, when a renewed radical upheaval follows on some other world-war. In the transition period in which we live, there is much in the conduct of many persons that approximates to apparent insanity. It is necessary therefore to bear in mind that certain unconventional ideas, so long as they do not act injuriously on the holder or on others, may be tolerated, as possibly they may be but forerunners of some high flight of originality, though in the majority of instances they may prove but the penumbra of total eclipse. We must not neglect to take into account the decadence "in certain phases of artistic and literary developments in which"—as Lord Balfour points out—"an overwrought technique straining to express sentiments too subtle or too morbid, is deemed to have supplanted the direct inspiration of an earlier and a simpler age. Whether these autumnal glories, these splendours touched with death are recurring phenomena in the literary cycle, whether, if they be, they are connected with other forms of decadence, may be questions well worth asking and answering."

In the present-day estimation of what constitutes insanity, allowance must be made for originality breaking with convention with a suddenness that startles those left in the groove. Such flights are becoming more and more frequent. Units, more keenly reactionary than the mass, break off, flashing by; some—very few—get permanently placed as fixed stars. Erasmus had these latter in view when he wrote—"A great many discoveries would never

have come to light if they had not struck the fire of subtlety out of the flint of obscurity." As Maudsley pointed out—"There are antagonistic forces at work in the determination of the orbit of human thought as there are in the determination of the order of the planets—a centrifugal or revolutionary force giving the expansive impulse of new ideas, and a centripetal or conservative force manifest in the restraining influence of habit, the resultant of their opposing action being the determination of the evolution of the mind. Is it not then beyond measure sad to think that precious germs of originality may be blighted by the practice, too prevalent in this era, of treating as insanity any marked deviation from the common standard of thought and action?"

Having so far touched on the unchanging basis of the normal mind, and the synchronous variability of conduct, as the result on it of special circumstances of time, place, education, religion and politics, all of which unite in forming the view-point, we can readily understand the essential unchanging basis underlying mental disease. Here we find the same instincts and emotions, weakened, exaggerated or perverted to an abnormal degree as the case may be, but expressed by characteristic behaviour. So that whatever doubt may be raised as to the continuity of the germ-plasm in physical hereditary composition, the transmission of psychical traits remains established, so uniform and universal are they, and so much in evidence by reason of the mental conflicts which never cease. It is the undue stress of these conflicts that fills our asylums, but its *modus operandi*, though old as man himself, is shrouded in mystery.

What explanation comes in whole or part to explain the problem, or to indicate treatment, from the material side?

The question is put, you will note, by the physician of the average public asylum—average in point of size—one of those physicians who has to deal with the bulk of certified insanity in our public institutions. Thanks to the splendid research work in laboratories established in the great teaching centres, and in the larger asylums at home and abroad, there is now a store of specialized knowledge available, dealing with the allied abnormal condition of the brain, the general nervous system, the blood, the endocrine and other organs in mental disease; added to which there is a vast accumulated treasure of physiological, bio-chemical and general pathological research. This work, which is of the very highest value and importance, to some extent establishes a material relationship to the psychoses, and not infrequently affords a clue to appropriate treatment in special cases. Reduced to actual practice, the pathological findings not only throw light on many dark places,

but indicate broad lines of medical treatment which may be summed up under three heads, *viz.* :

1. Restoration of disturbed metabolism.
2. Improvement in quantity and quality of the blood.
3. General hygienic conditions.

It is not too much to say that in the majority of cases that come under care marked success follows these measures, but the not infrequent failures still present a difficult problem. The relationship of the morbid physical and mental condition in many cases would appear to be incidental rather than dependent one on the other, as they do not respond to treatment, the *mens sana* still evading a return to the *corpore sano*, or *vice versâ*. Moreover, we find that insanity is sometimes associated with some definite bodily disease, and that as frequently that same bodily disease is found unassociated with mental disorder; this knowledge, so far as it relates to insanity in general, is of negative value. When, however, we find in cases of insanity that the removal of the bodily disease is synchronous with the restoration of the mental functions, and that this is accomplished *pari passu*, we are justified in the assumption of some connection of a definite character between the two morbid states. It is evident the linking-up must depend on something existing in the individual, and this unknown quantity in the personal equation is the all-important factor in the incidence of bodily and mental disease. But wanting in actual knowledge as we are of the nature of the link we must only gratefully rejoice in the fact that, in consequence of our special knowledge, we can join in the alliance for the patient's benefit—and for that happy position we are indebted to the results of physical and psychical research. Here it is that bio-chemical, bacteriological, hæmatological and toxicological considerations are suggestive and helpful.

We now turn for help to the psychical side of the treatment. Here, too, we have much stored knowledge to enlighten and guide us in the delicate handling of disordered mentality—there is much of the old lore that is priceless, and much of inestimable value in the new. The old psychology has been largely cast aside as unsatisfying; the new psychology professes to leave nothing unknown; experience teaches us that we may without loss abandon some of the old teaching, and reject with benefit some of the tenets of the new school. It is a necessary sequence of any progressive research in science that formulæ must be reviewed, and scrapped from time to time, and so in this age of activity in all-round investigations every *-ology* has been recast, and endowed with the prefix "new"; so we come to have a "new psychology," and consequently a new

psycho-pathology, for which it must be admitted there was pressing need. In the good old days disorder of mind was treated largely on the "expectant" method, and left to work itself out to decay or recovery. Active interference was limited to "appeals to reason"—a questionable method giving poor results. In later years a process was generally exercised by all asylum physicians: it consisted of getting the greatest possible insight into the patient's mind, hereby relieving tension and establishing confidence and support. This system had no definite name; it was simply expressed as "knowing your patient," and it proved as successful as any method could prove in the special circumstances. Just of late it would seem to be rediscovered and named "mental analysis"—at least so named when applied to cases of initial mental disorder before the establishment of a definite psychosis. In any event the method is the same at bottom, though it may not be necessary to carry it out in asylums to such a searching degree, since pronounced insanity needs no dredging to bring up the secrets of the depths, which, torn up by the nerve-storm, usually lie on the surface. The "autognosis" of to-day is very much akin to the "appeals to reason" of the Victorian era. In many instances it proves of very special value, and more frequently than it did in days when patients were not, as now, sent to asylums in the earlier stages of the malady. But whether the case is acute or chronic, as Jung puts it, "the direction of morbid thought must be accepted and followed up. Thus the explorer puts himself on the standpoint of the psychosis." In simpler words, we must continue to do what has always been our custom—we must put ourselves in the patient's place, for only by so doing can we properly estimate his standpoint. Having attained that essential knowledge, the line of suggestive treatment can be followed up; and this, coupled with such medical treatment as is suited to the special case from our investigation of the bodily condition, holds out the best prospect of amelioration, if not complete removal of the mental trouble. What, it may be asked, of psycho-therapy? Only those who are grossly ignorant of the conditions would expect any field for its use in the case of the certified lunatics in public asylums. There may possibly be an individual now and again suitable for its employment, but, as has been pointed out, the patients in such institutions exhibit such an overt degree of insanity as to render "mental exploration" either impossible or unnecessary.

Here, then, is the position of the asylum physician to-day. As regards the certified insane, he brings to bear on each case such bodily and mental treatment as research in pathology and psycho-pathology indicates as appropriate to the special individual.

Whatever the theories may be that are elaborated from pathological, physiological or psychological investigations, their results should be brought to bear as far as possible on the patients when likely to prove of benefit to them. It is obvious that to do so with any degree of success, the asylum physician must, however isolated his locality, endeavour to keep in touch with the march of progress in each of these departments. At the present time this is much more easy of accomplishment than in former years: to-day clinical laboratory research can be commanded to a large extent; current literature can be availed of in condensed form. The asylum physician is thus enabled to carry on with benefit not only to his own patients, but to others, the study of clinical insanity, which is the most necessary part of his daily work, and which is no less important than the study of its material associations and conditions. There is, in this way, as intimate an interchange between the ward and the laboratory as there is between body and mind. In this connection it may be fairly claimed that those who have in the past devoted their own superior intellects to the study of mind in disorder, and who have contributed to a very great extent to the building up of the clinical insanity of to-day, have established it in a very definite position.

But, as Dr. Sullivan, Medical Superintendent of Broadmoor Criminal Asylum, in his recent epochal work on *Crime and Insanity*, says, "The differentiation of the several clinical forms of insanity is for the most part artificial and provisional." With the exception of a very small number of groups, of which general paralysis of the insane is the most conspicuous example, "the mental diseases distinguished in the text-books are for the most part merely clinical types descriptive of the different ways in which disorder of the mental faculties, probably arising from an essentially similar morbid condition of the brain, may be combined in their symptomatic manifestations." Many years have gone by since Dr. Sullivan and I worked side by side; we have here arrived at the same viewpoint as to clinical insanity, though during those years we have travelled different paths in different spheres. With one reservation I would endorse his findings, namely, "Is the essential morbid condition underlying all insanity one of the brain alone?"

The point is, does the essentially morbid condition apply to the brain alone? May it not be more intimately bound up in the inconceivable manner of union of the material and psychical? The teaching of St. Augustine still holds true—"Modus, quo corporibus adhaerent spiritus—omnino mirus est, nil comprehendi ab homine potest; et hoc ipse homo est." ("The manner whereby souls

adhere to bodies is altogether marvellous, and cannot be conceived by man, and yet the union is man.")

To-day we cannot feel satisfied with the view that insanity is all material in origin, neither that it is a purely metaphysical creation. Of necessity from observation we are forced to see that body and mind work so closely together that there is still that mysterious unknown quantity to be reckoned with in arriving at the value of the human equation—"the manner of adherence"—and consequently the method of partial severance which dislocated normal functions, thereby constituting mental disorder. The one thing we do know is that the tenuity of the link is so extreme that so far it is altogether elusive to our mentality.

One cannot, however, contemplate hundreds of mentally abnormal individuals over a long period of years without falling now and again into fantasy of what is not conceivable. One of my predecessors in office, Dr. Browne, Scotch Commissioner in Lunacy, laid it down that "every practical man, even he who boasts his freedom from the shackles of hypothesis and the vagaries of speculation, has a theory; and whenever that is true and sound, or to what extent it is true and sound and has led to a judicious and humane course, it may be confidently claimed as a contribution to the science."

Sir Frederick Mott possibly comes nearest to an understanding of the *modus operandi* of functional disturbances when he indicates "a suspension of neuron function at the highest level." But still something is lacking, some more definite knowledge of the ultimate elements involved in the states so produced. Is the failure in the neuron function due to conditions inherent in the neuron, or to extrinsic conditions affecting it to such a degree that the balance between normal and abnormal is overthrown? Whatever it may be, the dividing line must be one of infinite delicacy and minuteness; possibly it depends on some third agent yet unknown to us, akin to and as mysterious in its nature as electricity, which present-day science regards as the basis of all matter. And as electrical phenomena can only be accounted for now by some interchange or displacements of protons and electrons, some like interchange or displacement may cause the disturbance of function. It has been demonstrated that light can be converted to sound, and that the "conversion" has been of practical use in relieving the disabilities of the blind. The fact that such "conversion" could be effected is suggestive of far-reaching results in allied natural laws to such an extent as to render the union of body and mind demonstrable. Even then there may well be no finality as to the inner working of the human mind, which must of necessity be constructively developed in

individuals by the accumulated influences of the past shaping the impressions of the present, ever progressing, but never reaching the goal—truly a chasing of rainbows. Meantime we must in our day take note of what interests us, of the real facts of life as laid bare, not indulging in too much theory. We must remember that Spinoza did not recognize Saturn's Ring as the Ring, and the concentrated attention of Mendel in the confined monastery garden has resulted in one of the greatest advances in the study of heredity. Recently the study of earthquakes has given testimony to an individual sensitiveness indicating a line of inquiry between seismology and physiology. The areas of scientific study are constantly being so enlarged that they tend to approach each other at various points, suggesting the "oneness" of ourselves and our world.

The psychology on which observation is based must be as true to herd psychology as possible, and free from personal colouring by the reporter. Dr. Suttie, in a recent article on "The Value of Human Evidence," makes the following observation: "In psychology, again, as in every other branch where we are dependent on the value of human evidence for our facts, and objective controls are rarely available, it is of cardinal importance that the evidence should be scrutinized inexorably, and every possible factor of perversion taken into account. It has to be recognized that the method by which the clinical facts are elicited in the psychoneuroses may itself induce a considerable degree of alteration in those facts, especially in the course of a long-continued investigation, and that the final picture we may believe ourselves to have observed may in part be of the nature of an artefact. For it is the foundation of psycho-pathological theories in facts of observation which requires strengthening, and if this could be stabilized, we might reasonably hope for the building of a solid structure upon it."

Dr. Suttie has further elsewhere struck a warning note against the blind acceptance of Freudian "metapsychology," and has ably shown how easily Freud fell into radical error when he ventured on biology in connection with some of his more recent theories, and in particular instances "his assumption that the brain cortex (outer surface) is the homologue or direct descendant and representative of the outermost layers of the ectoderm, whereas, of course, the contrary is the case," and the assumption he made that consciousness was accommodated on the surface of the brain instead of being safely lodged somewhere in the deepest recesses of it.

In conclusion I feel very deeply that this address so inadequately deals with a subject of the very highest importance—the study of

clinical psycho-pathology in public asylums. For bringing up the subject I may in apology remind you that the Association was originally composed only of asylum physicians, and that one of its objects was mutual defence. The need for such defence as was then necessary, has long since passed away. But at the present time, when so much public attention is directed, for several reasons, to institutions of the kind, it is not out of course to review our position in regard to them. My remarks must, however, be in no sense regarded as an apology. The mental hospital physician, though working in a restricted groove, is ploughing "no lonely furrow"; gleaned from the widest social field he deals with weakly seedlings, rampant weeds, and "sports"; he aims at strengthening the one, uprooting the other, and bringing back the latter to a normal level. As his work brings him in contact with all branches of general medicine, he must be primarily a physician. Special opportunities for the study of mental disorder alone constitute his claim to a better knowledge of insanity than the general practitioner. His position gives him an exceptional opportunity not only to alleviate insanity in its many forms, but to study incidentally the clinical aspects it presents. His study of psycho-pathology aims not only at more scientific accuracy, but secures to the patient the most essential element in the promotion of recovery—individual attention. At the moment the call in general medical education in America is "Back to the bedside," as it is felt that "however perfect the knowledge of disease may be, it is practically useless without the study of the patient also." I would strongly urge those who, situated as I am, are precluded from the fascinating methods of laboratory research, to be content to read, with as full an understanding as possible, the human documents that come within their ken, and to bring to bear on them the interpretations of the best and most practicable findings in general medicine, in psycho-pathology, in Christian science, in faith-healing, in psychotherapy and occupation therapy, using anything which may prove of benefit in a particular case. Some particular treatment, such as suitable occupation, which is such a valuable factor in promoting recovery, can only be had in asylums. It is obvious that persons suffering from mental disorder for many reasons cannot be provided with it in ordinary circumstances—personal, general and economic difficulties preventing. Even when it fails to secure recovery, many delusional cases of a chronic class can be rendered useful, by turning them on to work which they regard as a demonstration of their special claims to power, property, or divine prerogative. Success or failure, the results, if read aright, are controls to the deductions of theorists. The study of psycho-pathology

has an attraction of its own, greater perhaps than that associated with any other branch of medicine. It affords scope for practicable use to humanity at the moment, and a prospect of help towards the building up of such a knowledge of disordered mentality as will in the future tend to the erection of beacon lights to prevent many wrecks on the dark seas of depression and decay. Psychiatry has but comparatively recently come out of the land of bondage. Surgery had its dark days of pre-anæsthetic torture; medicine its time of drastic purgings and exhaustive bleedings; insanity its long era of revilings, chains and manacles, its agonies, its crucifixions, man the executioner, the mind of man the victim—no executioner more cruel, no victim more hapless. Let us thank God we live in times when these horrors are but memories, when reparation, tardy though it be, is made with the generous compassion born of regret, when we see our afflicted fellows no longer sneered at "for leaning all awry," but guided and helped along by a brotherly clasp. The members of this Association are the privileged ministers of this Christian spirit. More than half a century ago, when President of our Association, Prof. Laycock claimed that "a true mental science is in accordance with the fundamental principles of a Christian religion," and I feel that is no less true to-day, and that in its study and application you are no less zealous. It may be remarked that I have used the term "asylum physician" in preference to the term "specialist," "alienist," or "psychiatrician," as I feel that such titles have tended to keep up the unwarranted and inexcusable estrangement which to a great extent has existed between the physicians engaged in general medical practice outside and inside asylums, though disease is everywhere identical. Bodily disease is essentially the same in all individuals—cancer for instance, in its many varieties is a disease affecting *structure* all the world over. Mental disease likewise, though essentially the same in its complex basis, differs in the protean manifestations of *function*, not only in nations, as we have already seen, but in varieties, which are again modified by the temperaments of individuals. In this respect the clinical aspect of mental disorder differs from all other disorders, which presents practically the same syndrome at all times and in all places, and it goes to prove that a solely material basis does not explain the phenomena. Hence the clinical side of insanity requires constant study to be of scientific value, for it is no less scientific than laboratory investigation. To determine the nature, sequence and groupings of the symptoms of mental disease is of the highest practicable importance, and constitutes an essentially scientific contribution to medical science. Psycho-pathology directed by a knowledge of normal psychology,

and with a due appreciation of the very wide expansion of the latter, will be one of the greatest, if not the greatest, helps in the elucidation of the problem of disordered mentality. Thought is life, even when disturbed in function to a pathological degree; the cause of the disturbance is more likely to be discovered by and in a living mind than by the sole observation of dead matter. If the solution be found it is likely to be the product of a triple alliance between workers in psycho-pathology, psycho-physics and bio-chemistry.

The Thyroid Gland in Bodily and Mental Disease. An Address with Lantern Demonstration. By Sir FREDERICK MOTT, K.B.E., LL.D., M.D., F.R.S., Lecturer on Morbid Psychology, University of Birmingham; Director of Course of Psychological Medicine, Maudsley Hospital.

THE subject which I intend to bring before you to-day mainly relates to the thyroid gland, a part of endocrinology I have been interested in for some time past.

Some time ago, before the war, in conjunction with Dr. Brun I investigated the central nervous system of three fatal cases of myxædema, and found marked chromolytic changes in the ganglion cells of the medulla, especially of the vagal nuclei. Subsequently I was able to examine the cortex of the brain and the spinal cord of four other cases dying in Claybury Asylum, and they showed the same chromatolysis of ganglion cells; one in particular, which I shall show you a lantern-slide of to-day, exhibited this change in a very marked degree, not only in the medulla but also in the cortex. There was so much dementia in this case that the doctor who had sent it in from outside believed it was a case of general paralysis, but the fluid and blood when examined showed a negative Wassermann reaction. Moreover, the changes in the brain were not at all like those of general paralysis. It was a very severe case of myxædema which had been undiagnosed and neglected, and extreme neuronc changes had occurred in consequence.

After that I was very interested in the question of the endocrine glands in mental disease. I was fortunate enough later to get the help of Dr. Kojima, a Japanese medical man, who is now Deputy Director-General of the Japanese Navy, to work at this subject in conjunction with myself. I made the *post-mortem* examination in 100 cases dying at Claybury and he very carefully weighed all the endocrine glands, and the whole results of his examination were published by him in the seventh volume of the *Archives of Neurology*

and Psychology. Now his observations showed a very marked variation in the weights of the thyroid gland, which could not really be accounted for except on the idea that either it was in some way related to insanity or in some way related to the weight of the body, but the body was weighed in every case, and he did not find any relation to the weight of the body. The body-weight might be low and the thyroid weight high, so that that was put out of consideration. Then the natural inference was it might be that the bodily disease from which the patient died had some influence. Of course it is well known that during pregnancy the thyroid gland is increased in its activity; it increases in size, as do also other glands, as, for instance, the pituitary and the adrenal glands, showing the correlation of these three in relation to this primal instinct of reproduction. And we have to remember that in the research which I have undertaken on the amount of iodine which one could find in the thyroid glands of people dying of various diseases in hospitals and asylums that the iodine content may be deficient, because a large quantity is being used in the body. Thus when the foetus is developing in the pregnant woman it requires a large quantity of thyroxin; and consequently the gland enlarges and more is produced, yet the iodine content is less in it than in a gland of ordinary weight and size. So that we have two conditions to remember. First of all, is the deficiency in the iodine content due to increased metabolic processes using up the iodine, or is it due to a failure in the gland itself to produce it?—and that is one of the difficulties with regard to placing value upon the research of the iodine content. Then we know perfectly well that the iodine content may vary also with the age of the patient, and that it varies with the food. This is shown by the fact that in districts in Switzerland and in America where goitre is prevalent, it has been found that by administering small quantities of iodine either in the food or as a medicine, or better still by putting it in the water supply or in the salt, the cases of epidemic goitre diminish in the most miraculous manner; so it shows what a very important element this is in connection with the vital functions of the body. Iodine has been shown to increase the electrical activity of the nervous system, and we all know how it increases oxidation processes and metabolism.

I will first of all show you a coloured photomicrograph of the thyroid gland, just to call attention to one or two facts in regard to this iodine content, because after all, as Kendal has shown, it is the protein compound with iodine that is the essential constituent of the thyroid gland, and a normal thyroid gland will produce it and an abnormal gland will not. I was under the impression,

when I first worked at the subject, that if you saw plenty of colloid in the vesicles it would mean a fair amount of iodine, but it is not always the case. Very often you find very little colloid and a lot of intervesicular epithelium. If the intervesicular epithelium is normal you may obtain relatively a large amount of iodine, but if the intervesicular epithelium is replaced by fibrous tissue and lymphocytes, that means the cells which reproduce the iodine have been destroyed. Then the iodine content is proportionally very low.

I should tell you the weight of the normal thyroid is about 25 grm., but it may vary in health from 15 to 50 grm. It depends, as I have said, upon various conditions, especially the condition of reproduction. I may mention this fact, showing the importance of the thyroid: When I was in Switzerland last year with Dr. Rollier, of Leysin (a man who has had more experience probably than any man living and more success also in the treatment of tubercular disease of bone and joints), he said: "When I can feel a good thyroid I give a good prognosis." Now he had had exceptional experience, because he was for a long time assistant to Prof. Kocher, of Berne, who was the greatest authority on the thyroid gland, and it was his work and that of Reverdin which first led to our knowledge of myxœdema resulting from removal of the thyroid gland, so his (Dr. Rollier's) opinion is worth something as showing from experience the importance of the thyroid gland as one of Nature's defences in combating infections, especially tubercular infections.

I now show a number of colour photomicrographs illustrating the histological characters of the gland.

[Sir Frederick Mott then explained the first two lantern-slides. The normal gland with a good iodine content, and the vesicles filled with eosin-staining colloid; the intervesicular epithelium normal.

With reference to the third lantern-slide Sir Frederick said: In this case there was a deficiency of vesicles and colloid, but abundance of normal intervesicular epithelium, and the iodine content was above the average. This was a case of melancholia, and the gland only weighed 6 grm. There you see the colloid is purple instead of pink. I therefore thought this might have no iodine at all in it, but as a matter of fact it had the normal proportion to its weight, but not sufficient, because the gland only weighed 6 grm., so it was deficient really in quantity in the body. Still, why was it fairly normal as regards the total weight of the gland? Because there is very little interstitial fibrous tissue and the intervesicular epithelium is normal. The conclusion is that when the intervesicular epithelium is normal, then you get an amount of iodine proportional to the weight of the gland.

In myxœdema, as this lantern-slide shows, there are no vesicles at all, no intervesicular epithelium, because it is replaced by lymphocytes and fibrous tissue. There are one or two cells that look more like sympathetic ganglion cells than anything else, but there is no intervesicular epithelium. This gland was from a case of myxœdema occurring in a woman of about 50, who was admitted into the asylum and who died a few days after admission. The extreme chromatolysis of the ganglion cells of the brain, medulla and spinal

cord have already been demonstrated to you. We may therefore correlate this disappearance of the kinetoplasm (energy substance) which the chromatolysis indicates to be an absence of the thyroxin of the gland.

This is a colour photomicrograph of ganglion cells.

Here is the best cell. Here is one not quite so good, and the others are very seriously affected, and all through the nervous system we found the same change, but it is more easy to show it in these large cells than in the other cells. As already remarked, in many of the cases examined it was the vagus nucleus that seemed to be most affected, and that is rather interesting in connection with the affection of the vegetative nervous system in relation to the endocrine glands.

I will now show lantern-slides illustrating a myxœdematous cretin before and after treatment by thyroid gland. It illustrates the other point which most of you know all about, but I want it as a support to the essential importance of the thyroid gland in relation to neuron function. The lower spinal neurons and those of the subcortical portion of the brain develop, because during pregnancy when these structures are being formed the infant is in all probability getting thyroid secretion from the mother. This premise is supported by the following facts: The thyroid gland is enlarged during the whole of pregnancy, yet the thyroid gland of the mother yields very little iodine because it may be presumed it is all being used up by the growing child; but when the child is separated from the mother and can no longer get the thyroid secretion the cerebral cortex of the child is still in an undeveloped state. All this highest level of the brain is still non-myelinated, and it will not develop normally unless thyroxin is supplied to it. This hypo-thyroid or athyroid child is also stunted in growth. Now see the effect of the administration of thyroid. Here is the child at 5½ years; fifteen months after treatment it has become quite an intelligent-looking child, and the growth is practically normal. Here, later still, at 7 years of age you would not know there was anything wrong with it, and that shows, I think, the very great importance of these endocrine glands in relation to the development of the organ of mind. We have been looking at mind too much from the metaphysical point of view, and we have to realize that the mind is dependent upon the whole body, and the thyroid gland plays a very important part in mental development. Again, in the case of myxœdema, there is slowness of thought, slowness of action, and in many cases mental disorder, especially in women at the climacteric period, when the reproductive organs fail to produce their internal secretions, and there is a liability, in consequence, to a disturbance of the endocrine balance. For that reason I have conducted a number of histological researches on the thyroid, the pituitary and the adrenal glands in 100 cases dying in general hospitals, hospitals for consumption and asylums.]

Most of you know that for a long time past I have been interested in studying the condition of the reproductive organs, and Dr. Laura Foster before the war investigated the histology of the ovaries in over 100 cases. The ovary is a very difficult structure to examine, because it is not easy to cut in sections, and of course it had to be cut in series in celloidin and then 1 in every 10 sections was examined. The ovary is a pretty good size, and such a procedure involves an examination of an enormous number of sections. She did it very conscientiously, but she died without publication of the results of her investigation, and I had to publish them for her in the *Archives of Neurology and Psychiatry*, vol. vii. There was clear evidence obtained that certain forms of insanity showed a deficiency in the primordial follicles and of maturation of the ovum; particularly was this observed in dementia præcox as compared with an acquired disease like general paralysis.

I then examined 100 testes. The reason I mention this is because the thyroid, the suprarenal and the adrenal glands are intimately connected with the reproductive organs. In conjunction with Dr. Emslie Hutton, who helped me, I found that there is a very marked change in the adrenal medulla in cases where you have deficiency in the reproductive organs, in dementia præcox especially, but also in other forms of insanity. In conjunction with Dr. Isabel Robertson I found a similar condition also in the pituitary, and those of you who have seen the *Journal of Mental Science* will realize that there are very characteristic changes in these glands. I fully expected one would find similar histological changes in the epithelial cells of the thyroid gland, but I have not. There are probably ætiological factors in connection with the thyroid gland that do not exist in the other glands, which would explain the fact that no definite changes in the nuclei and the protoplasm of the cells occur which could be correlated with dementia præcox.

THE IODINE CONTENT OF THE THYROID GLAND.

As histological changes could not, apart from myxœdema, be associated with any definite clinical symptoms, I thought a chemical investigation might throw some light on the relation of the function of the thyroid to disease.

I could not undertake this chemical examination myself. In the first place I was not competent to do it without considerable preliminary work, and secondly, I had not the time, so in order to make the results reliable I obtained the services of Mr. Hugh Nicholl, M.Sc., an expert chemist, to estimate the iodine content in 100 glands. The glands were sent to me from the various L.C.C. mental hospitals, and I also obtained a number from general hospitals and hospitals for consumption. A detailed account of these investigations, which are *not yet completed*, will be shortly published. Zunz examined the thyroid glands of Belgian soldiers who were killed in the war, and found that the average iodine content was 15 mgrm. Mr. Nicol found the amount varied from a mere trace to 50 mgrm. in these 100 cases. As a general rule the iodine content was very low in chronic exhausting diseases, *e. g.* tubercle.

Among these 100 cases there was one of suicide; the man died almost immediately from shooting in his mouth. The thyroid gland weighed 25 grm. and contained 27 mgrm. of iodine. Another man died of meningitis after four days. He had a high percentage of iodine too; it would amount to about 27 or 28 mgrm. to a gland that weighed over 30 grm. Another patient committed suicide by corrosive poison. I think he must have been a lunatic, for

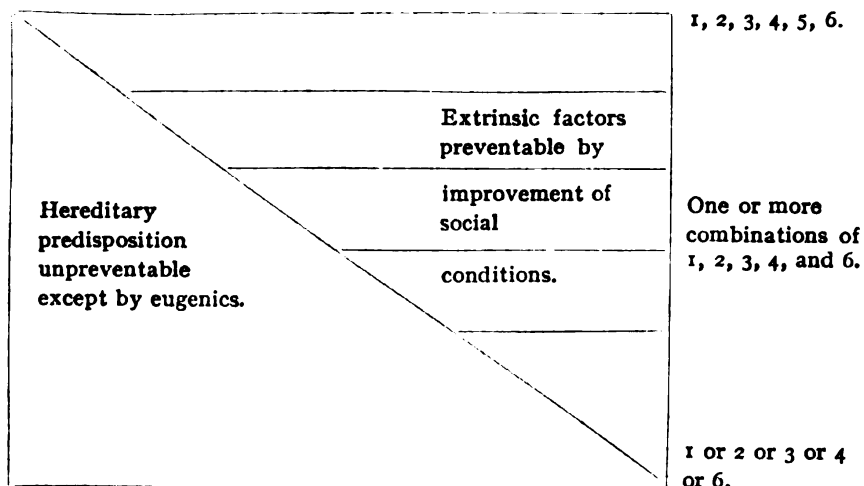
he might have found a better way than taking a horrible poison which did not cause death for some time. I do not know whether there was any evidence of previous insanity brought in or not at the inquest, but anyhow his iodine content was very low indeed—as low as any of those dying in the asylums.

Like Kojima, I found that the weight of the gland varied very much. There was one extraordinary case of thyroid hypertrophy. It was in a woman who had a huge ovarian tumour which was removed by Dr. Petrie. A similar tumour developed in the other ovary, and with it an enormous goitre. The gland weighed 109 grm. Well, that contained 50 mgrm. of iodine. Was the hypertrophy and the large amount of iodine connected with the ovarian tumour? Really one does not know what to say about the iodine content, for, as before remarked, there are two factors which may cause a variation from the normal, *viz.*, production and utilization of the thyroxin.

Pellagrini published in the *Archives de Biologie des Italiens* the results of an examination of 100 hospital cases and found the same difficulties; he could not determine any definite association between the amount of iodine and the disease, nor could he find any histological condition which he could associate with a general bodily disease. His investigations only applied to cases dying in a general hospital. He found the iodine content in certain diseases was very low, especially in tuberculosis. I obtained the same results. In tuberculosis there was hardly any iodine in the gland; it was probably being used up as fast as it was formed. But what was very interesting in his cases—and I had one case similar—was that in cirrhosis of the liver there was relatively a large iodine content. This may be explained by the fact that the liver plays such a very important part in connection with metabolism of the body, that if there is an inadequacy of function, the amount of thyroxin required is much less, and it remains, therefore, in the gland. It is probable that in all chronic microbial diseases with fever there is a great drain upon the secretion of the thyroid gland, and this shows the importance of Dr. Rollier's statement that he found where there was a good thyroid development he could make a good prognosis, because the thyroid gland is essential for metabolic processes. Consequently when a patient suffering with a mental disease is affected by an infective bodily condition, thyroxin, which we have seen is essential for oxidation processes and neuron function, is exhausted. This exhaustion of thyroxin, as manifested by the low iodine content, may be explained either by insufficient production or increased utilization, owing to its action as a defence against toxins engendered by microbes.

I want to get away from metaphysical speculation ; we cannot yet explain by bodily changes a great many things concerning the causation of mental disorders, but we can formulate some fundamental propositions, *viz.*, all psychological processes are dependent upon physiological processes ; all physiological processes are dependent upon oxidation processes. If there is a condition interfering with the oxidation processes in the highest level of the brain, and the highest level is in an unstable condition with a low neuro-potential, then a bodily disease which uses up the thyroid secretion, or interferes with the production of thyroxin, may be the means of delaying or preventing restoration of neuro-potential in the highest level. However, it must be remembered that in mental disease there is the inborn disposition impressed by Nature, as Bacon said ; that you cannot alter ; and there is the disposition imposed by environment. There are some people whom you can hit on the head, you can fill them with alcohol and give them syphilis and infections of every kind, and they may suffer with any amount of trouble and anxiety, and they do not become insane ; there are other people with whom physiological stress is sufficient to make them insane ; and there are all grades of dispositions between these two extremes.

[I illustrate it in this way :



(1) Physiological ; (2) psychological ; (3) autotoxins ; (4) microbial toxins ; (5) microbial invasions * of the central nervous system ; (6) alcohol and drugs.

* In the case of invasion by micro-organisms, such as the spirochæte of syphilis, the organism of lethargic encephalitis, of tubercle, the intensity and derangement of the mind depends upon whether it affects the highest level and disintegrates the psychic unity by the toxins produced in the cerebral tissue. The loss of mind depends upon the degree of destruction of the highest (control) level by the virus produced by the multiplication of the organisms.]

I do not think, however, we pay enough attention to the child's upbringing. In a large number of cases of adolescent insanity, if we studied the children we should find they were abnormal from early life.

[I will now refer to the chemical analyses of four groups of thyroid glands shown in the accompanying table.

<i>Group Formalized Thyroids.</i>					
	Hospital for Consumption. Tubercular.	General hospitals.	Mental hospitals. Insanity.	Mental hospitals. G.P.I.	
Cases Nos.	32 .	10 .	99 .	112 .	157
	60 .	11 .	102 .	130 .	158
	61 .	13 .	102A .	130A .	161
	63 .	14 .	106 .	133 .	163
	66 .	15 .	109 .	135 .	164
	68 .	16 .	111 .	140 .	165
	77 .	77 .	111A .	141 .	169
	78 .	18 .	113 .	153 .	175
	80 .	26 .	113A .	154 .	176
	81 .	.. .	.. .	155 .	..
Number of cases	10 .	9 .	9 .	19 .	
Moisture <i>per cent.</i> on formalized specimens	73.3 .	74.7 .	67.0 .	75.9 .	
Calcium mgrm. <i>per cent.</i> on moist tissue	5.0 .	2.3 .	3.7 .	1.8 .	
Iodine <i>per cent.</i> on dry tissue	0.158 .	0.124 .	0.066 .	0.136 .	
Iodine <i>per cent.</i> on moist tissue	0.042 .	0.031 .	0.022 .	0.033 .	

On account of the quantity of tissue needed for the calcium determination, only one analysis on each group was made for iodine.

I think the low percentage of moisture in Group iii is due to a fibrotic condition of the gland which was frequently found. There was more dense fibrous tissue on the whole in those cases than in the other groups.

Then you see what a very large quantity of calcium there is in the tubercular cases as compared with Group ii. Possibly one or two of those cases were cases of tuberculosis. In the general paralytics it is only 1.8, as against 3.7 of the insane in mental hospitals. Now the reason why there is a high calcium content in these as compared with the general paralytics is that a considerable number of them were cases of dementia præcox who died of tuberculosis.

Therefore one can explain why there is so considerable an amount of calcium.

The iodine in the dry tissue is .158 in the consumption hospitals, .124 in the general hospitals; but look how low it is—.066—in the cases of melancholia and dementia præcox; whereas in the general paralytics it is pretty high—.136.]

A much larger number of cases must be investigated before any positive assertion can be made, but if further analyses confirm these results, they would show the low iodine content in cases of insanity—especially dementia præcox—cannot be explained on the assumption that it is due to the tuberculosis from which so many die. We are still collecting thyroid glands, and this must be regarded as merely a brief preliminary account of the work which is still in progress. Dr. Pickworth is carrying on now this investigation upon a number of glands which have been collected and dried for him, and he will continue this research of Mr. Nicol.

on these lines. It is essential in an investigation of this kind to take into consideration the fact that unless a considerable number of glands are contained in each group, a fallacy of an average being taken arises, because one case with a very low or very high percentage may vitiate the result. The method that was used by Mr. Nicol was Martindale's method. We tried also the method of Kendal, but it was unsatisfactory for small quantities; we tried also the method of Nardelli, which Pellagrini used, but we found that was not nearly so satisfactory as Martindale's method.

Mr. President, I owe you an apology for bringing forward these results in a somewhat incomplete form, but it already represents a large amount of work.

There is one other point I would like to mention: I said just now that I had found evidence of correlation of the thyroid function with that of the pituitary. Now it is interesting to notice that when there is myxœdema and an atrophy of the thyroid gland there is an enlargement of the pars intermedia of the pituitary—the part of the gland which secretes a colloid which Harvey Cushing always maintained went into the cerebrospinal fluid, and recently the observations and experiments of Prof. Dixon at Cambridge have shown that this is correct. Well, if there is an increased quantity of this colloid matter going into the cerebrospinal fluid beyond what is normal, it may be that that has some effect upon the brain-cells, and gives rise to the changes that I have shown you to occur in myxœdema.

People used to think that the most important part of the suprarenal gland was the medulla, but that is very doubtful. There are two glands in the teleostean fishes—the adrenal medulla, which belongs to the sympathetic system, and the cortex, which is a separate gland. The cortex adrenalis is of very great importance in the vital functions. It contains in its cells a lipoid cholesterin ester which is essential for the building up of the tissues of the body, and therefore we find it highly developed in the fœtus before birth. The gland increases in size during pregnancy, and what is interesting to us is that in sepsis the cholesterin ester disappears from the cells—I have examined so many glands that I am certain of this. Elliott first pointed it out in his lectures: That in a case of septicæmia you might find disappearance of the cholesterin ester from the cells of the cortex. If that takes place and is so obvious, surely every case of sepsis must draw upon that natural defence of the body, and use up a *certain amount* of cholesterin ester which is so essential to vital processes. Consequently again you see the importance of sepsis in lowering or destroying some of the natural defences of the body.

I have found that at least 75 *per cent.* of the cases dying in asylums die from either tuberculosis, broncho-pneumonia or dysentery—all of them infective processes—and in the majority of these cases one finds evidence of varying degrees of disappearance of the cholesterin ester of these cells and therefore of a substance which serves as an antitoxin. Some authorities, indeed, speak of the medulla being possessed of angio-tonic function, the cortex of antitoxic function, but this is restricting their respective functions too much.

[This coloured photomicrograph of the suprarenal gland illustrates partial disappearance of the lipoid in the cells in a case dying of tuberculosis.

The existence of this cholesterin ester in the gland is shown by the cells staining an orange-red colour. As you know, it is not wholly the tubercle bacilli that do the mischief; it is also the pyogenic organisms that come in and produce fever; where patients had died of tuberculosis with cavitation and high temperature there one found the cholesterin ester in these cells had been almost entirely destroyed. It is rational, therefore, to assume that this gland is another of the natural defences against the toxins of microbial infections.]

When well-developed sexual organs exist there is usually a well-developed cortex adrenalis; the two both grow from the genital ridge. When the testicle is absent on one side I have found the gland weighs about half what it does on the other side. I have noticed, moreover, that general paralytics have a well-developed cortex adrenalis, whereas in cases of male dementia præcox, as a rule, there is a poorly developed cortex adrenalis.

I hope I have not been too long and discursive in my arguments about the importance of the study of the endocrine glands in relation to mental diseases, and the relation of chronic sepsis to the diminution of the natural defences of the body as shown by the investigation, imperfect as it is, of the thyroid and suprarenal glands.

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Is Dementia Præcox a Definite Clinical Entity? ⁽¹⁾ By GEORGE M. ROBERTSON, M.D., F.R.C.P.Edin., Professor of Psychiatry in the University of Edinburgh, and Physician-Superintendent of the Royal Hospital at Morningside, Edinburgh.

To ask this question is not to throw discredit on the great work that Prof. Kraepelin has done for psychiatry. Indeed, the opinion may be frankly recorded that no conception dealing with mental disease advocated during the last fifty years has been more fruitful of beneficial results than that of dementia præcox. Out of a symptomatology which before had been more or less chaotic and disheartening Kraepelin evolved a scheme which, if it did not introduce perfect order, certainly marked a very great advance. And not the least of the benefits that psychiatry has derived from him, has been the greater accuracy of observation that his views have enforced upon all clinicians who desire to make an exact diagnosis or prognosis.

It is nearly thirty years since Prof. Kraepelin first entertained the idea that dementia præcox was a distinct disease. From an early period objections were raised, which often took the form of criticism of the name he had chosen for this disorder. It is admitted that neither the final outcome of dementia nor the invariable presence of youthfulness are essential elements in the clinical picture of the disease termed by him "dementia præcox." This anomaly is unfortunate, but no serious harm results from it, if we are not misled, and if we can recognize the types of mental disease that Kraepelin intends us to include under that designation. No one nowadays objects, for example, to the term "melancholia," although it involves a discarded theory of causation by black bile. Esquirol, however, made an attempt about 100 years ago to replace this misleading name by a new and more accurate one, but the old and familiar title "melancholia" has held its own, while Esquirol's proposed "lypémanie" is now completely forgotten. Judging by this analogy the name "dementia præcox" has probably come to stay, if it represents as definite a clinical entity as melancholia.

Other objections have been raised by eminent psychiatrists, of whom I will only mention Sir Thomas Clouston and Dr. Charles Mercier. The former was the most observant clinician we have had in our day, and his secondary dementia of adolescent insanity plainly includes a large, if not the major part of the cases now described as dementia præcox. He was satisfied that his own system

⁽¹⁾ A paper read at the Annual Meeting held in Belfast, July 3, 1924.

of classification fulfilled all clinical requirements, and never adopted Kraepelin's views. Dr. Mercier, on the other hand, did not excel as a clinician, but he was our ablest and most accurate psychologist and logician. He was inclined to hold strong views and to express them strongly. He was not satisfied with the account given by Kraepelin of dementia præcox, and described it as a rubbish-heap of symptoms with about as much definition of outline as a suet dumpling.

Differentiation.

It has often been alleged against dementia præcox that under this designation there were probably collected together several groups of dissimilar psychoses which had this one feature in common—that they terminated in dementia. It is true that Kraepelin has laid great stress in making a diagnosis on the course and final result of a psychosis, and in this he is probably right. It is understood that he was much impressed, when following his cases to their termination, with the excellent recovery that some adolescent cases made and the hopeless dementia into which others fell. He decided to examine in detail the course and symptoms of these favourable and unfavourable cases respectively, and as a result of the knowledge gained by this investigation, he created his two great groups of "manic-depressive insanity" and of "dementia præcox." The whole world has now—with only minor reservations—accepted the favourable manic-depressive group of periodic psychoses, for which it was prepared by its familiarity with cases of *folie circulaire*, and with the descriptions given by French alienists. Manic-depressive insanity with its two phases of elation and depression depicts a simple, well-defined and fairly uniform disorder of a functional nature, but there is not the same agreement or feeling of certainty that the unfavourable group of dementia præcox represents as definite a clinical entity. It forms a most complex and extensive disorder, and the variety of its symptoms is bewildering. Its boundaries are vague and blurred in several directions; its many subdivisions are either fluctuating or else very different from one another. Whether it be functional or organic no one can say definitely, for the highest authorities uphold conflicting opinions on this point, and a reconciliation of these seems to be possible only on the supposition that under the term "dementia præcox" is included more than one form of mental disorder.

We will now refer briefly to some features of dementia præcox which are of importance in establishing a claim to regard it as a clinical entity or otherwise.

Vague Definition.

In the first place, the diagnosis of dementia præcox is often difficult. Its special characteristics according to Kraepelin are a disintegration of the inner unity of the mind due to a peculiar weakening of the functions, first of feeling and acting, and finally of thinking. In the end there results a disruption of the personality and an unfitness for social life. This statement is, however, so vague that, as a matter of fact, the diagnosis is seldom, if ever, made from the presence of these phenomena, but rather from the association of secondary or accessory symptoms, such as hallucinations, delusions, peculiar actions and muscular conditions. There is no one symptom, unless it be terminal dementia, which is pathognomonic, and more than in other disorders, the onset, the course and the association together of the various symptoms have to be studied before coming to a diagnosis. The balancing of these various elements, the giving of a just weight to each associated factor and the final considered judgment make the diagnosis frequently not a certainty, but a matter of opinion.

No one can read Prof. Kraepelin's account of dementia præcox without realizing the paramount importance which he attaches to the development of a terminal dementia. It is true that he admits the possibility of recovery, but almost always grudgingly and with some qualification, and the description which he has given us of the disease has been prepared solely from the histories of patients who actually became demented. It is hard to find an adequate explanation for this severe attitude, because there is scarcely any disease of which a uniform termination can always be predicted. Even in cases of cancer it is believed that recovery occasionally takes place. The only suggestion that can be offered is that the certainty of diagnosis in a case of dementia præcox which has recovered is less than in one which ends in dementia. This diagnostic uncertainty is not only an unpleasant commentary on the fulness and accuracy of our knowledge of the symptoms of the disease, but it also impairs our ability to give a definite prognosis. The longer, however, we study this subject, the more certain it becomes that some cases of dementia præcox end favourably, and Dr. Streckel and Dr. Willey record in the April number of *The American Journal of Psychiatry* that over 13 *per cent.* of their cases recovered.

Doubtful Subdivision.

Kraepelin at one time was satisfied with three subdivisions, namely, a hebephrenic, a catatonic and a paranoid group, to which there might be added another entitled "dementia præcox simplex."

In his last edition he has, even after eliminating paraphrenia, divided the disorder into no less than eleven different varieties. Some of these differ so widely from one another that no one but an expert would imagine they were related varieties of the same disease. Yet, in spite of these remarkable differences, there exist so many intermediate forms that it is impossible to separate the groups entirely from one another. I have observed with curiosity during the last five years⁽³⁾ that very few English-speaking authorities have accepted these eleven subdivisions, and most appear to be quite content with the simple groups which Kraepelin made use of originally.

From these Prof. Kraepelin has himself removed a group of systematized delusional cases, which he has called "paraphrenia." This procedure has not been approved of by some, who believe that it is impossible to differentiate these cases of paraphrenia which he has separated from cases of "paranoid dementia præcox," which he has left behind, and certainly the relation between these delusional forms of mental disorder is exceedingly close. If the four varieties of paraphrenia be added to the eleven varieties of dementia præcox, we have no less than fifteen subdivisions.

The conclusion to be drawn from this alarming process of subdivision into eleven or fifteen groups is, that the course and symptoms of dementia præcox must vary to an extraordinary extent to make such an operation possible. This feature of itself throws doubt on the unity of the disease. Doubt is, however, also experienced as to the value of these numerous subdivisions, seeing that it is admitted that the different groups pass into one another by insensible gradations.

Indefinite Outline.

The limitations of dementia præcox are also vague and uncertain, and in some directions the outlines are so hazy that it seems to pass smoothly into other forms of mental disorder without overstepping any natural or obvious line of demarcation.

I have already mentioned that paranoid dementia præcox passes insensibly into paraphrenia, and it is further believed by many that paraphrenia runs as gradually into paranoia. If doubt exists as to whether paraphrenia should be regarded as a form of dementia præcox or as a separate disorder, there is reason to carry forward the same doubt as to the separation of paraphrenia from paranoia.

Further, there are many cases of paranoia which resemble very closely the hypo-manic phase of a delusional type of manic-depressive insanity. Such cases every now and then prove difficult to

classify, and have to be carefully observed. If the case recovers, we may assume that it was one of manic-depressive insanity, though it may have continued for years. On the other hand, if the patient does not recover, the diagnosis of paranoia or paraphrenia may be made.

In the next place, there are periodic and recurrent cases of apparent mania which may also be classified under dementia præcox. Kraepelin admits the difficulty created by this type of case, and states that he at one time regarded them as cases of mania; now he regards them as cases of dementia præcox, because after the lapse of time symptoms of weakness of mind develop in many of them.

In the fourth place, some acute cases of dementia præcox with confusion and hallucinations also pass insensibly into cases of delirious or confusional insanity—the so-called “infective-exhaustive-toxic insanity.” In some cases where the cause is very definite, the course short, and the recovery perfect, no one would think of confusing the case with dementia præcox. But there are other cases which run a prolonged and an unfavourable course in which it is impossible to be certain of the diagnosis. During the war many cases diagnosed as dementia præcox recovered, and it is certain many of these were cases of confusional insanity due to exhaustion.

It is thus impossible to avoid coming to the conclusion that the limits of dementia præcox are vague and undefined in several directions, and particularly that it appears to run by insensible gradations into confusional or delirious insanity. Practically all the accessory symptoms that occur in dementia præcox on the strength of which the diagnosis is so often made, such as unsystematized delusions, numerous hallucinations, disorders of will and catatonic phenomena, are well seen in cases of delirious insanity.

Among other complications may be mentioned the possibility of a combined psychosis, for recurring manic-depressive phases may occur in dementia præcox. Conversely we also meet with cases of mania and melancholia associated with symptoms of dementia præcox. In these it is suggested that there exists a condition of latent dementia præcox, which has been made manifest by the attack of manic-depressive insanity.

Uncertainty of Etiology and Pathology.

The greatest differences of opinion exist as to the cause of dementia præcox. Kraepelin believes there is some connection between it and secretions from the reproductive glands. The most definite anatomical changes in these glands which have yet been

found have been described by Sir Frederick Mott. On the other hand, a few years ago ovariectomy was extensively performed at least in one mental asylum, and, it is said, with excellent results. The contrary opinion of the effects of this mutilation now seems to prevail, and ovarian extract is sometimes prescribed. The thyroid and other glands have also been accused, and thyroid extract has been given for the treatment of the disease, as well as partial removal of this gland. Toxæmia of an organismal origin has also been blamed with some reason, and the changes in the internal secreting glands have been described as secondary. On the other hand, a purely psychic origin has been put forward by many as a very important factor in ætiology, but this has received no support from Kraepelin himself. Jung apparently would wish to have a footing in both camps, and he has put forward the novel theory that an emotional complex lies at the bottom of the trouble, but that possibly it operated by producing a toxin. This is very improbable unless the effect is produced through the action of the emotions on the internal secreting glands.

In spite of the suggestion of the psychogenic nature of dementia præcox, Alzheimer has described extensive changes in the cells of the second and third layers of the frontal and temporal lobes with an increase of neuroglia in the deeper layers. These observations were made in cases that suffered from acute symptoms, and it is quite possible that in these there was a severe toxic infection.

Such a surprising variety in the cause and in the findings, here again produces a state of great uncertainty, and the conception of a definite disease with a more or less uniform causation and pathology does not receive support.

Not one Disease, but a Group.

The effect of all these observations encourages the idea, which Bleuler advocates, that in dementia præcox we do not have one disorder, or one disease process, but a group of diseases, which have this feature in common—that they tend as a rule to produce dementia.

Explanation of Diverse Manifestations.

On the other hand, certain considerations tending to support a contrary conclusion must not be forgotten. In the first place a specific cause may produce very various mental symptoms, as is seen—for example—in the various forms of alcoholic insanity and in general paralysis. The same cause may be weak and slow in action, or it may be intense and sudden, and the results

will be very different. There may also be numerous intermediate actions and results. Further, it may act extensively and generally, or the action may be local, and the symptoms produced will vary. They will also vary depending on the particular locality affected. Personal idiosyncrasies, of course, exist, and heredity is a factor always to be considered in relation to such a single cause.

In the second place the cause of an attack of insanity is seldom or never a single or a simple one. We may assume that invariably several factors act in combination, the effect of each of which can never be differentiated in a particular case. The number of possible factors is very great and they also vary greatly in their nature. As a result it is conceivable that the different forms of insanity tend to merge into one another, depending as their symptoms do on the combined action of so many agents in varying combinations. This is a view which has been suggested by Sir Frederick Mott among others, and it has much to be said in favour of it. While it is quite certain that we see cases which conform exactly to the types described in our text-books, we also see many other cases which are intermediate between these recognized types. To use a simile which I have employed elsewhere, the various forms of insanity appear to be like the colours of the rainbow. In the middle of each band we have the colour perfectly pure and quite unmistakable from every other colour, but at the margin of the band this colour merges insensibly into another which is totally different from it. It is, however, impossible to say exactly when and where the one colour passes into the other. May it not be possible that the apparently different varieties of dementia præcox may be explained in one or both of these ways?

Prognostic Efficiency.

If we cannot assert with certainty that dementia præcox is a definite unity, we must all agree that we are indebted to Kraepelin for having supplied us with an accurate and minutely detailed account of the symptoms which are associated with unfavourable types of mental disorder. Sir Thomas Clouston, who described the secondary dementia of adolescent insanity with wonderful vividness and accuracy, did not give us any contrasted and detailed analysis of those cases of adolescent insanity which would recover, as compared with those which would pass into secondary dementia. It may be said of Kraepelin that he has enabled us to predict from the symptoms with a remarkable degree of certainty the types of insanity which will recover, and those which in the vast majority of cases will not do so. Whether dementia præcox will be found

in the future to consist of three or four different forms of mental disorder or not, we are nevertheless now able to group the unfavourable types of psychoses together, and this prognostic ability is invaluable.

Patients suffering from typical manic-depressive insanity practically always recover if they are young and in good health. On the other hand, patients presenting the symptoms of the typical varieties of dementia præcox seldom recover. We also see a large number of forms which are intermediate between these recognized types, and in these cases what prognosis is to be given? The practice which I have followed for many years has been to give a good prognosis in cases of typical manic-depressive insanity, and an unfavourable, but not hopeless, prognosis in cases of typical dementia præcox. In the intermediate cases the prognosis has inclined proportionally to the favourable or to the unfavourable side, depending upon whether the symptoms partook more of the nature of manic-depressive insanity or of dementia præcox, and the extent to which they did.

Conclusion and Acknowledgment.

In conclusion, therefore, while dementia præcox may not yet have established its claim to be considered a definite clinical entity, and while it is possible that under this term there may be included several varieties of mental disorder, all of which tend to develop one or other of the eleven different forms or degrees of terminal dementia described by Kraepelin, we are nevertheless all indebted to him on two grounds.

In the first place, he has enabled us, from a study of the symptoms of our patients, to differentiate with a great degree of success between cases which will terminate favourably, and those which will terminate unfavourably.

In the second place, he has benefited psychiatry by imposing upon all conscientious physicians the necessity of following the course and of observing the symptoms of their patients with the utmost care and accuracy.

(*) Since Dr. Mary Barclay's translation of Kraepelin's *Dementia Præcox*, published by E. & S. Livingstone, 1919.

Further Reflections on the Rôle of Auto-infection in the Ætiology of Acute and Chronic Mental Disorders.⁽¹⁾ By D. CHALMERS WATSON, M.D., F.R.C.P. Edin., Physician, Royal Infirmary, Edinburgh.

It is some eight or ten weeks ago since I had the privilege of enjoying the hospitality of your genial secretary, and in an unguarded moment, doubtless stimulated by my host's genial company, I half committed myself to giving a further communication on this subject, and he committed me for the other half. The truth is I have no paper to read. I have very little further to add to what I have said before, and I have certainly nothing further of note worth publishing. At the same time I very gladly welcome the opportunity of reviewing the position, so far as it appears to me in the light of the further available records on the subject in the last two years.

I would like first of all to add my very keen quota of appreciation of the extremely admirable presentation of the subject that Sir Frederick gave us this morning. It seems to me that from every point of view it was particularly admirable, and not the least of its value was that it was such a very excellent introduction to a discussion dealing with the relationship of physical disease to mental disorders. He pointed out that :

1. Psychological processes are essentially subservient to physiological conditions.
2. These physiological conditions have, as their essential bases, processes of oxidation.
3. These considerations necessarily bring us to the study of the nutrition of the brain tissue and the provision of an adequate supply by blood, of a good nutritive standard, with resistant powers characteristic of good health.

These considerations form an admirable introduction to my remarks, which are directed to amplify what I have previously written on the possible and probable rôle of systematic auto-infection or intoxication as a factor of importance in so altering the nutritive fluids of the tissues as to be mainly responsible for the development of acute, subacute or chronic mental disease. My views on this subject were given *in extenso* to the Annual Meeting two years ago, and published in the Journal. I need not recapitulate them unduly, but at the outset it is advisable to emphasize two points:

- (1) That, in again focussing attention on one ætiological factor, it must not be assumed that we under-rate the importance of the hereditary factor or of other causes of strain as playing an important part in the causation of mental disorders; and—

⁽¹⁾ Abstract of a paper read at the Annual Meeting held at Belfast, July 3, 1924.

- (2) It is important to emphasize the necessity of taking the necessary broad view with regard to the probable source and nature of auto-infection of the system.

These sources include the teeth, tonsils, nasopharynx, intestinal and genito-urinary tracts, any one of which may be solely or, in conjunction with others, profoundly deranged, and a source of sepsis. It is necessary to emphasize this point because of the recent tendency in American literature to look at this question of sepsis in relation to mental disorders rather too exclusively from the point of view of teeth, the importance of which have been so strongly emphasized by Cotton. In this connection it is interesting to refer to a criticism of a distinguished American alienist, who, at a recent discussion on this subject, was obviously inclined to repudiate the importance of auto-infection on the lines advocated by Cotton and others. This speaker's attitude was obviously much too narrow and ill-informed. His criticism amounted to this: his experience and knowledge led him to oppose Dr. Cotton's teaching, and the reason put forward was that he could effect as much improvement in his cases by measures which largely or completely ignored the teeth, and which consisted largely in the use of intestinal lavage and in the internal administration of *Bacillus acidophilus* for the prevention of constipation. Now, this speaker was obviously not aware that he was condemning, on the one hand, a theory and practice which he was himself practising and did not know it; it is this ignorance of the vital elements in the problem which is tending at the present time to retard progress in this important matter.

Twenty-one years ago, when, in conjunction with the late Dr. George Wilson, I first ventured to write on the subject, I made certain recommendations in regard to the methods of investigation of mental cases, these being based on the results of *post-mortem* data obtained from patients under Dr. Wilson's care. In that record I pointed out that mental cases called for investigations on wide general lines, using modern methods of clinical investigation, and in considering any physical focus of disease, attention was not to be directed to any single focus, but to every possible existing focus of disease, and to the interactions of these on each other, and on the system as a whole.

Since Dr. Cotton's paper two years ago, increasing attention has been paid to this subject both in this country and in America, but with it all, the fringe of the subject has hardly been touched. In a paper by Dr. George Hendry in the *American Journal of Psychiatry*, 1923-24, some interesting data are given in regard to the results of X-ray observations on the gastro-intestinal conditions associated

with mental diseases. These are of a remarkably striking and suggestive character. They fully confirm the present writer's experience of radiographic observations which he has made on mental cases from time to time in the course of the past fifteen years. In this country Dr. Goodall's observations from a preliminary series tend further to emphasize the importance of fresh attention being devoted to this subject. In the course of the past two years, my additional experience of mental cases has tended to emphasize and confirm the soundness of the tentative conclusions which I have previously drawn. I cannot do better than give you the details of a case, one of exceptional interest, a typical case of chronic mania of over twenty years' standing.

Twenty-one years ago the patient—a woman, now æt. 64—was admitted to a mental hospital suffering from acute mania. About a year later she was taken home and was nursed privately for nearly twenty years, under the usual Official Control. I saw the patient in the spring of this year. With regard to the mental condition, the nurses in charge reported that virtually no day passed without there being one or more outbursts of pronounced mental excitement. She became impulsive, violent, and showed pronounced loss of self-control, and was frequently dangerous to herself and to the nurses in charge. In the interval her conduct was more normal, especially so in the presence of a visitor or stranger. The correctness of the diagnosis may be assumed from the history. I was asked to see her, to see whether there was any reason to suspect a physical basis as a factor of importance in her condition. The nature and severity of the case was shown by the fact that for a long period of years the patient had been in charge of three or four nurses, and an acting matron. A week or two before I saw her she had voluntarily complained of severe toothache, and a septic tooth had been extracted. She had only five or six teeth left, which were in an extremely septic condition. I learned from the matron in charge that for many years the patient's temperature showed slight rises, which were attributed to a cold or influenza. The medical man in charge told me that three months previously she had had a very definite attack of pyuria, and the nurses reported that the stools had long been persistently offensive. On the occasion of my visit the patient was perfectly sane and rational, and gave me a lucid description of her symptoms, of her explanation of the symptoms, and of her feeling of utter hopelessness as to her condition and future. She dated her illness from the birth of her last child, twenty-two years previously. This had been followed by an attack of abdominal symptoms which had been labelled peritonitis, during which the urine was drawn off from the bladder

by a catheter for a week or two. She had had a considerable amount of dental troubles for a long time prior to her last pregnancy. On physical examination the patient presented on first sight a remarkably healthy appearance. A close examination, however, revealed a slight degree of anæmia, a persistently rapid pulse-rate with weakness of the heart-sounds, an advanced degree of focal sepsis in the teeth and gums, and a marked septic condition of the stools and a very slight trace of albumen in the urine, without, however, any other indication of urinary disorder. For a considerable period the patient has complained of hæmorrhoids. A later, more detailed investigation of the case thoroughly served to confirm one's original impressions. A bacteriological examination made with great care from the apices of the extracted teeth revealed a pronounced streptococcal infection. The matron in charge of the nursing home—one of several established by Prof. Robertson in Edinburgh—reported that when the patient's bowels moved, the odour of the stools permeated far and near in the home. The temperature variations are revealed in the chart. The pulse-rate was never satisfactory, and showed from time to time variations in character indicating a marked degree of myocardial weakness. Under a course of treatment directed to correct the obvious sources of auto-sepsis, more especially in the teeth and alimentary tract, with skilled nursing, the progress of the patient was very satisfactory. Her progress for seven weeks from the mental point of view was remarkably satisfactory. At this time the patient's relatives saw her for the first time, and were amazed and delighted with her mental condition. A day after this visit the patient died suddenly from heart failure.

This case was interesting and instructive. It was a case which, although greatly improved on the mental side, died from a physical disorder which was, like the mental disorder, beyond question the result of this chronic septic infection. It was only the good family history and her naturally good constitution which had enabled her to live for many years, when most patients under similar conditions would have succumbed.

A study of this patient's temperature chart is specially instructive. For the first four weeks the temperature was more or less constantly elevated, of which there was little clinical evidence, and only on one occasion in this period would the patient's condition have suggested to the nurse the advisability of taking the temperature. Observe at a later period, when an autogenous vaccine prepared from the teeth and fæces had been administered as a contributory measure in the treatment, that the temperature is decidedly more satisfactory.

For an interesting comparison with the above case, from the standpoint of the general physician, I would like to draw your attention to another temperature chart of a patient who recovered from an attack of primary anæmia, whom I recently showed to our local Medico-Chirurgical Society. His condition was regarded as essentially the result of sepsis of intestinal origin, and his clinical condition was extremely critical. The result of the administration of a vaccine in this case was satisfactory to a more marked extent than any I have ever seen. Later experience fully confirmed one's views as to the special value of the vaccine. The first small dose was a desensitizing one. The improvement co-incident with its administration was very remarkable and was maintained later. The special point to which I am drawing attention is the study of this temperature chart prior to and after the vaccine administration, in comparison with the chart of the case of chronic mania above recorded.

It is not my intention to elaborate the methods of investigation or the methods of treatment which I have outlined in my former paper and previously published. Let me conclude by again emphasizing the need for studying these clinical problems, not from the point of view of the mental specialist, but more from the point of view of the general physician, and also for the need for studying them as a whole, and further, of the need of studying them from the biological rather than from the more narrow point of view of present-day medicine.

I venture to conclude with a suggestion to your Research Committee. At our present rate of progress our knowledge of these problems and our skill in increasing the recovery-rate in mental disorders will increase very slowly—much more slowly than is generally believed possible. The data required for solving the problems involved can be comparatively quickly obtained by a collective, well-organized investigation of a kind which, it appears to me, could be readily established by securing the co-operation of even a small number of observers in a few institutions provided with the facilities, in *personnel* and outlook, for carrying out the proposed investigation. Such an investigation, I believe, could be successfully promoted under the auspices of the Association. I am optimistic enough to believe that in a few years' time, the results that would be obtained by an investigation on the lines suggested would add enormously to our knowledge of the causation of mental disorders, and materially increase the present recovery-rate. The value of this investigation would be further enhanced from the fact that the results could hardly fail to throw much additional light on many problems in general medicine at present obscure.

A Survey of American and Canadian Psychiatric Opinion as to Focal Infections (or Chronic Sepsis) as Causative Factors in Functional Psychoses.⁽¹⁾ By Dr. A. T. HOBBS, Director of the Homewood Sanitarium, Guelph, Ontario.

THIS subject has caused much discussion among psychiatrists since the presentation of a paper dealing with this matter which was read before the American Psychiatric Association at its annual meeting held in Quebec City in June, 1922.

Dr. Cotton, Superintendent of the Trenton State Hospital, New Jersey, advocated in this paper that "so-called functional psychoses we believe to-day originate in chronic foci of infection, somewhere in the body," and that the psychosis should be considered a symptom and not a disease entity. In other words manic-depressive insanities, dementia præcox, paranoid conditions and psychoneuroses are merely symptomatic of some focal infection associated with secondary disturbance of the endocrine system. He stressed the sources of infection as arising mainly in four regions, namely, infected or impacted teeth, diseased tonsils, infected cervixes and colon lesions. He under-estimates when he says that hereditary dispositions and exciting factors like worry, grief, shock, etc., only play a secondary rôle in paving the way for these psychoses, and in fact everything outside of these foci like syphilis, alcoholism, endocrine disturbances, are of comparatively minor importance.

The demonstration bacteriologically of the infected conditions and the introduction into the cerebrospinal system through the lymphatics and blood of any toxic matter from a focus anywhere no one disagrees with.

There are, however, features connected with Cotton's form of treatment and the conclusion he arrives at, that have aroused opposition among his friends in the psychiatric profession of the U.S. and Canada.

A summary of his statements as presented at this meeting is as follows: During the past four years at the Trenton State Hospital, there have been discharged fourteen hundred patients recovered or improved sufficiently to return to their homes. These occurred among the functional psychoses through the removal of infected or impacted teeth, enucleation of diseased tonsils, amputation of uterine cervixes, and resections of inert or extremely constipated colons. These were done under Cotton's supervision, assisted by able surgeons, oto-laryngologists, dentists, etc., upon

⁽¹⁾ Communicated to the Annual Meeting held at Belfast, July 3, 1924.

cases who suffered from manic-depressive insanity, dementia præcox, paranoid conditions and psychoneuroses, with the result that over 80 *per cent.* of all patients operated upon by these methods recovered or improved. He compared this with a 37 *per cent.* recovery in similar cases for a period of ten years preceding the prosecution of this work.

He makes this significant statement: "That in 250 colectomy operations, 62, or 25 *per cent.*, recovered; the death-rate was 30 *per cent.*; improved cases numbered 15 *per cent.*, and 30 *per cent.* remained unimproved." This gives a total of 55 *per cent.* who remained unimproved or died as a result of the colectomy performed.

In his summary he states that—"It is imperative that every case admitted to the State Hospital should have a thorough diagnostic survey, and all foci of infection eliminated." All physicians agree with this statement, as a mental patient has as much right to a careful physical examination and the removal of all physical ailments as the sane. But other methods of treatment should not be ignored, and indiscriminate extraction of teeth, and the elimination by colectomy of chronic constipation, with its high death-rate, should be relegated to the past, and simpler methods adopted.

The effect of the removal of infected foci through the four routes emphasized by Dr. Cotton in the recovery from the psychoses mentioned, was carefully investigated by Drs. Kopeloff and Kirby, and a synopsis of their work was given in a paper read at the meeting of the American Psychiatric Association held in Detroit, June, 1923.

Dr. Kirby is the clinical director of the Psychiatric Institute at Ward's Island, New York, and Dr. Kopeloff is the bacteriologist. They were assisted by competent oto-laryngologists, gynæcologists, dentists, and the psychiatric staff of the institution.

Dr. Kirby presented the results that were noted upon 120 functional psychoses. These were divided into two classes known as the control and operative groups. There were 62 of the former, and 58 of the latter. These patients were under observation and treatment for a period of two years, and the 120 cases—48 men and 72 women—were selected as typical of the class known as functional psychoses.

There was not the slightest taint of syphilis in any of the 120 cases, as each was subjected to a Wassermann examination. A fully detailed family and personal history was obtained, and a thorough psychological examination was made, while frequent, often daily individual notes of the progress of these patients were written up. A complete physical examination was carried out

in all these, including their endocrine status. The women were subjected to a thorough gynæcological examination, with special reference to cervical infection of the uterus. Whenever possible, these patients underwent a thorough gastro-enterological scrutiny, including bacteriological tests of the stomach, and radiographs of the abdominal contents. A close inspection of the mouth and throat was made, including a radiograph of the teeth. The mental features of all were carefully diagnosed by Dr. Kirby and his staff.

A comprehensive bacteriological examination by Dr. Kopeloff, accompanied the operative procedures in an effort to ascertain the character of the streptococci and their importance to the various foci of infection. In the culture of teeth, one could scarcely attach the same importance to molars extracted in a field of blood and saliva as could be attached to teeth surgically removed. The latter is unquestionably the method of choice, but requires considerable time, and must be carried out under the most rigidly aseptic conditions to be perfectly reliable. It was therefore deemed expedient to remove surgically only the anterior teeth from the upper jaw and impacted or unerupted teeth. Other extractions were rarely cultured as being unreliable.

A careful search of Cotton's numerous publications nowhere reveals the bacteriological technique employed in his work, except the culture of the stomach contents.

It is clear when you consider Kirby's statistics that patients with infection in the teeth improved or recovered in about the same ratio in both control and operative cases. These data of the teeth could hardly be construed as constituting an argument that focal infection of this character is an ætiological factor in the functional psychoses.

The excised tonsils were cultured in the usual way, and the organisms isolated were those frequently demonstrable in the mouths of apparently normal persons; consequently their significance for the health of such persons or of psychotic patients is considered quite indefinite. Certainly there was no evidence that might lead one to infer that the same bacterial species were to be found in abscessed teeth and infected tonsils.

The examination of the stomach contents cannot justify any of Cotton's assumptions, as it is admitted that no effort was made to eliminate the colon bacillus, which is a constant inhabitant of many common articles of diet, such as water, milk, meats, sausage, fish, ice-cream, eggs, etc.

Much is made by Cotton that culture in the mouth and stomach simultaneously resulted in identical cultures only in fourteen cases. Obviously one expects to find more species of bacteria in the

mouth than in the stomach, as the gastric juice is well known to have some germicidal effect. It would be just as rational to administer autogenous vaccines made from bacteria occurring in the mouth as from those found in the stomach under these conditions.

Take the intestinal tract. How is the infection in the lower intestinal tract to be diagnosed? Cotton says habitual constipation, bilious attacks, more or less abdominal pain, are often misconstrued as indigestion, which is probably chronic appendicitis.

Cotton exhibited radiograph studies of the tract after a test-meal of barium sulphate before a meeting of psychiatrists last year in London.

Kopeloff carried out exactly the same observations on his patients and failed to find anything which would justify a major operation. The most stubborn cases of constipation yielded to the administration of *acidophilus* milk; the physical condition improved, and the radiograph examinations indicated increased motility.

There still remains the question of cervical infection to be considered. Of the 38 patients examined by the consultant in gynecology of these test-cases, 19, or 50 *per cent.*, gave evidence of infection. This is some 30 *per cent.* lower than the incidence of cervical infection diagnosed at Trenton State Hospital. Six cases showing cervical infection were operated on. Of these only one showed any improvement in the course of the psychosis. In two other cases in this group, it was not possible to carry out an operation.

There are further 11 cases in both series that showed cervical infection, which were not operated on. Four of these improved, or recovered, in spite of such infection. The material was cultured at the operating table.

As a result of Dr. Sturmdoff's clinical gynecological examination, he emphasized the fact that he considered all these to be very mild cases of infection, in which, under other circumstances, operative interference would not be advised.

The conclusion must be arrived at from this work on the cervix that infection is not as frequent as claimed by Cotton, that it is usually mild in nature when present, and that it is practically without influence on the course of the psychoses.

This investigation at Ward's Island Psychiatric Institution was stimulated by the claims of Cotton, and therefore it has been necessary to painstakingly scrutinize his work. Their sole interest was in the acquisition of the pertinent facts, since they had no theories or personal motives to defend.

Kirby states that the findings in these 120 cases where an infected

focus was demonstrated, in one of the four regions selected by Dr. Cotton as the basis of his argument, should be sufficient to convince any unbiassed psychiatrist. These 120 cases were divided into two groups, comparable as to age, sex, duration of the psychosis, diagnosis, prognosis, and the infected condition concerned.

The 62 patients in the control group were classified as follows :

Dementia præcox	.	.	.	.	32
Manic-depressive	.	.	.	.	25
Miscellaneous	.	.	.	.	5

In the 58 operated cases the classification was :

Dementia præcox	.	.	.	.	33
Manic-depressive	.	.	.	.	20
Miscellaneous	.	.	.	.	5

All the miscellaneous patients were of the type known as psychoneurotic or psychopathic personalities.

The duration of the psychoses previous to and after admission was carefully recorded.

In the 62 patients of the control group, 50 had a large number of infected or impacted teeth, 31 had diseased tonsils, 11 infected cervices, and 10 suffered from severe constipation.

In the 58 operated cases, 37 had 253 diseased teeth removed, 37 enlarged tonsils were excised, 27 diseased cervices were amputated, and the 10 patients who were afflicted with severe constipation, together with the 10 cases in the control group, were successfully treated by the administration of *B. acidophilus* milk, as far as their physical ailment was concerned.

The total benefited by treatment, *i. e.*, recovered and improved mentally, was 75 *per cent.* in the operated group of manic-depressive cases and 72 *per cent.* in the control group.

In the dementia præcox the percentage of improvement in the control group was slightly better than in the operated cases, as 25 *per cent.* is to 18 *per cent.*

On the whole, then, the operated group appears to have improved no more by the elimination of focal infection than the control group, which received no operative treatment whatever.

Of special interest to psychiatrists is the final analysis of the mental status before and after operative measures of those who showed any improvement or recovery.

In this group there were 22 cases, divided as follows :

Manic-depressive	.	.	.	.	15
Dementia præcox	.	.	.	.	5
Psychopathic personality	.	.	.	.	1
Psychoneurosis	.	.	.	.	1

In the manic-depressive cases 8 recovered and 7 improved. In all the recovered cases except one a good prognosis had been noted before any treatment was instituted. In this solitary instance, the prognosis was considered good for improvement but poor for recovery. She went through various mental phases, but finally recovered.

Of the 7 cases who improved, the prognosis was omitted in one patient, but in the other 6 a fair or good prognosis had been made before treatment was begun.

In the 5 cases of dementia præcox that improved more or less, the prognosis was noted as good for improvement excepting one, who eventually reached a much improved condition. In the latter case a tonsillectomy was done long before the mental breakdown. After her admission into the hospital a small amount of tonsil was found diseased and removed, but no mental change for the better was noted until six months after operation, when she was considered well enough to be tried at home. We do not think that the betterment in this case was due to the removal of the left-over portion of the diseased tonsil.

In the other two remaining cases of this group, which improved, one was a psychopathic personality and the other a psychoneurosis, in both of whom a fair prognosis for improvement was given. Both justified the prediction.

Kirby says from the standpoint of initial prognosis and acute outcome, the weight of evidence is therefore against the assumption that the observed improvements or recoveries can be attributed directly to the removal of infected foci.

It has been emphasized by Cotton that when the source of infection is removed, a rapid improvement takes place in the mental condition of the patient.

In this group of cases numbering 22 that we are dealing with, the following relation between the time of operation and the beginning of improvement was recorded: it was found that 6 cases improved before treatment was begun, 4 cases improved within one month after operation, 9 cases improved in from one to two months, and 3 improved after two months or longer.

If one considers a month as a reasonable period for improvement to manifest itself after treatment, then only 4 of the 22 cases came within this limit.

There are two important aspects to the problem in hand: the first is a consideration of the actual clinical results obtained; the second deals with the reliability of the methods used in achieving such results.

Unquestionably the latter factor must have a significant influence

on the former. The burden of proof in all cases is on him who diagnoses infection in tissue.

While there is general agreement in regard to the diagnosis of teeth, and perhaps tonsils, the same cannot be said for infection of the stomach, lower intestine and cervix. Focal infections as diagnosed and operated at Trenton State Hospital are not consonant with the procedures by other well-established clinics and hospitals.

One is forced to conclude that Cotton's interpretations are at variance with his facts, chiefly because they have not been critically examined with a view to their limitations. The Rehfuß method is valuable in establishing an acidity, but not for determining infection in the stomach. The failure to have control of either a psychiatric or laboratory nature and the incomplete record of the subsequent condition of all treated patients leaves much to be desired.

Dr. Kirby agrees that it is desirable to eliminate focal infection when present in psychotic patients, to alleviate any physical disorder in any mental diseased patient; but nevertheless he states it has not been shown that focal infection is the ætiological factor in functional psychoses.

My own experience extends from 1895 to 1901. Several hundred mental patients were operated on for various physical disorders at the Ontario Hospital, at London, Canada. Among these I amputated 76 infected cervices. Improvement was noted in the majority, both mentally and physically. After the lapse of twenty years an investigation was made of the mental condition existing then in these 76 patients: only 38 *per cent.* had maintained their mental recovery.

A summary of the opinions of some of the leading psychiatrists of Canada and the U.S.A., obtained during the past few months, is worth recording.

Dr. Ryan, Ex-President of the Ontario Psychological Association, says: "The question arises, where is the toxin generated? Only by a thorough exploration of all possible fields can the truth be arrived at. Cotton, I think, has gone altogether too far in colonic surgery."

Dr. Barrett, Director of the Michigan Psychiatric Institution, and who was President of the American Psychiatric Association at Quebec, takes this view-point: "That psychiatric problems are altogether too complicated to find their cure in any such direct method of approach as that of Dr. Cotton's. They are the result of disordered balances among a variety of factors, and while it may be true that impaired physical health through focal infection

may be one of the disturbing elements, I cannot see how it is as important as Dr. Cotton assumes. His view-point is extremely narrow, and has had a bad influence upon psychiatric development in America and Canada."

Dr. White, Superintendent of St. Elizabeth's Hospital for the Insane at Washington, D.C., and Vice-President elect of the American Psychiatric Association, and an author of international fame, sums up the situation in these few terse sentences :

"Recognizing the inextricable inter-relations of somatic and psychic phenomena, as expressions of the living organism as a whole, it is manifestly illogical and as dangerous for the future progress to approach the problems of that organism exclusively from either the psychic or somatic side.

"The exclusive centring of the attention upon the body or the mind of a sick individual is, in my judgment, an error of serious proportions. To make psychiatry the handmaid of the gastro-enterologist, the genito-urinary surgeon, the dentist, while man's crowning glory, his mind, is made a minor or negligible factor in the entity of disease—this attitude from my view-point is profoundly erroneous and derogatory to rational psychiatry."

Dr. Russell, Medical Director, Bloomingdale Hospital, in New York State, makes the following comment :

"Our experience here is not in accordance with that of Dr. Cotton and some others who claim remarkable results. For a long time we have made an X-ray of the teeth of our patients as a routine procedure. A pelvic examination is made on all the women admitted, and a urologist from the New York Hospital examines all the men. We have also made a large number of gastrointestinal series, and the work is checked up by consulting internists who visit us every week from the New York Hospital.

"Our observations would lead us to believe that no remarkable nor specific results can be demonstrated to be effects of this treatment, except in cases of delirium, due to sepsis.

"I may say that a number of cases have gone from here to be treated by measures directed towards focal infections, principally operative in character, and cases have come to us from institutions where they had been treated by operative procedures for focal infections."

Dr. Macfie Campbell, Director of the Boston Psychopathic Hospital: "My own personal impression is that Cotton presents an over-optimistic estimate of what can be done along surgical and bacteriological lines."

Dr. Brush, the Editor of the *American Journal of Insanity*, at the Quebec meeting said: "I am in a position to know of the

work and theories of the doctors of Baltimore. I may say that the views held by many of the leaders in professional thought and practice in Baltimore are changing. There are some who look upon focal infections as the source of nearly all the ills that flesh is heir to, but those views are being modified. In an interview with a Baltimore dentist, the latter stated 'that he was not called upon to do as much extraction of teeth for the patients of some of these medical men.' My Baltimore surgical friends have not been called upon with any increased frequency to perform operations for the removal of supposed foci of infection in the colon, uterus, or elsewhere.

"To my mind a colostomy or colectomy is a somewhat serious operation, but Dr. Cotton speaks of them in a way that would lead one to think the operation is as simple and as devoid of danger as the extraction of the tooth.

"We find ourselves told by the friends of patients, people who have heard of these activities and this theory, not through medical publications, but through lay journals and the daily press, that something is being done at Trenton, by Dr. Cotton and his associates, which the rest of us are not doing, and they are demanding that we adopt these theories and follow the methods pursued at Trenton."

Dr. Haviland, Secretary of the American Psychiatric Association, expresses his opinion as follows :

"One of the features of Dr. Cotton's work which appears most questionable is the fact that despite his assertion to the contrary, his theories have not been accepted by the general psychiatric profession of the U.S. and Canada, and that no other man has obtained the results he has secured by using them."

Dr. Franklin S. Wilcocks, Superintendent of Norwich State Hospital, Conn., wrote to a medical friend of his as follows :

"We have been using a form of treatment somewhat similar to Dr. Cotton's for the past three or four years. We have done work on tonsils, teeth, uterus, cervix, rectum and anus, and in general have followed out the ideas expressed by Cotton and others, with the exception of the intestinal resections. My observations, while not compiled, for various reasons, as Dr. Cotton does, are as follows : With the care of the teeth and throat there is a uniform gain in weight. With any surgical procedure and methods such as are used, many patients have become quieter, more orderly and amenable to discipline, and able to be out of doors and have some occupation around the hospital. We have had some cases that have made an exceedingly marked change for the better soon after our work on them. Whether this has just *happened* or not, I am not sure. However, it has occurred with a frequency to give the work credit.

I am not in a position to cite the great records that Dr. Cotton does, but I am entirely willing to take the stand in evidence that these things which tend to increase the physical condition do improve the mental standing of many of our patients."

I quote the following extract from the publication, entitled *Cure—The Story of the Cures that Fail*, by James J. Walsh, M.D., Ph.D., Sc.D., which was published in 1923 :

"We are hearing much about focal infections and the surgeons are going to prolong life by cutting out various portions of the intestinal tract, and make existence ever so much more comfortable than it has been. Those of us who went through the epidemic of what was called ovariectomy at the end of the nineteenth century, when any woman was likely to be unsexed for almost anything she had the matter with her, and when 'marvellous cures' of everything from organic epilepsy to hysteria, and from unbearable pain to the discomfort of a floating kidney, were reported as relieved by the operation, are not likely to be carried away by the surgical enthusiasm of the moment. It is easy to see, however, that we have a crop of 'cures' that will probably fail, all ready for the reaper who comes to gather them into his barns and store them away."

Dr. Barker, of Baltimore, whom Dr. Cotton quotes, says his views on focal infections are that "more common sense than is sometimes exhibited should be used in dealing with the so-called focal infection questions."

"The indiscriminate pulling of teeth simply because the nerves in them are dead seems to me to be unwise, as does the radical operation upon quiescent sinus residuals. Moreover, excision of the colon in the hope that this will cut short the course of a manic-depressive psychosis or a schizophrenic process seems to me the height of absurdity.

"As in most such matters common sense in practice will take a middle path, avoiding the extremes of those who attribute everything to focal infection, on the one hand, and that of total denial of the influence of chronic infections upon normal mental states upon the other."

Mr. Keilty, at Quebec, stated: "There are facts of focal infection which are well established. In forming your opinion, take the middle ground. The body mechanisms have lines of defence preventing this invasion elsewhere. The conclusion cannot be drawn off-hand, that streptococci appearing in the mouth, or the cervix, are necessarily present in the metastatic lesion."

Dr. Frankwood Williams, Medical Director of the U.S.A. National Committee for Mental Hygiene, gives the opinion of the

Committee that "Dr. Cotton's undertaking is based upon the assumption that in a great many cases of mental disease which do not depend upon organic changes in the brain, there is some local infection (teeth tonsils, walls of stomach, or intestine), which results in chronic intoxication, and is wholly or in part responsible for the appearance of the mental symptoms. In several published articles Cotton claims that recovery or substantial improvement has taken place in a very large percentage of all cases operated upon for these local infections. He believes that dementia præcox, manic-depressive insanity, many of the psycho-neuroses, and confused states of doubtful nature, are caused or found to be influenced by the local infections which he finds. Operative work upon the teeth, tonsils, and other organs, has been largely confined to disorders in the groups mentioned.

"This, we think, is a fair statement of Dr. Cotton's position. Those who differ with Dr. Cotton point out the fact that a large number of patients, suffering from exactly the same disorders, have no local infection which can be determined by the most extensive examination, and that of a vast number of people who die every year with chronic infectious diseases only a relatively small proportion exhibit any symptoms of mental disturbances whatever. They are not convinced that his pathological methods, by which the nature and extent of these local infections are determined, are trustworthy, and they believe that the alleged recoveries are remissions very common in the types of disorders which he has chosen for his surgical work, and that if these cases were followed for a sufficient length of time, it would be found, in many instances, that the improvement was temporary, and that the disease, after a short time, pursues its customary course.

"The matter is a highly important one, but we think that anyone who desires to have a friend or relative go under the treatment given at the new Jersey Hospital, should consider the facts given above very carefully, and be guided by the opinion of others. We do not know whether Dr. Cotton would quite agree with us in saying that the whole subject is in the experimental stage, but this is our belief, and we think it is shared by a great many of those who constantly see mental patients. We say this without desire to detract in any way from the great importance of the work which Dr. Cotton is doing. If, out of all the studies made, some substantial gain of knowledge of the relation between infection and mental diseases is made, while at the same time no sick person is harmed, Dr. Cotton's work will mark an advance in psychiatry. We should feel, however, that in every doubtful case, the purely psychiatric issues should be decided after consultation,

and the decision as to whether an operation is to be done, or not, be made by such consultants, and not by one who is avowedly committed to a definite view-point on a subject which is by no means beyond the state of investigation—an experiment."

Dr. C. K. Mills, of Philadelphia, in a paper on "The Dental Cause of Nervous and Mental Disease," says: "I am convinced that focal infections, tonsillar, dental, etc., are being over-worked, and that more harm than good has been done by the exploitation of the focal infections as a cause of insanity, although serious focal infection may prove deleterious in both the sane and insane. We seem to be passing through another of the periods of fad and fallacy which so often has misled the profession and the public. If the craze for violent removal goes on, it will come to pass that we will have a gutless, glandless, toothless, and I am not sure that we may have, thanks to false psychology and surgery, a witless race."

My own conclusion is that the question of focal infection in its relation to psychoses is an important one to all psychiatrists. The enthusiast points the way, but the final results are attained by the sane conservative worker. As a profession we should be progressive, and adopt all the methods that will improve or recover these unfortunates. We should not abandon or belittle the various therapies, good nursing, food, and many other approved ways of treatment, but to confine ourselves to a limited surgical field in our care of the insane is not doing justice to our patients.

Time is an important element in their recovery, and we should not terminate too early the skilful care of the trained psychiatrist and good nursing in an effort to produce startling statistics of cures, only to be disillusioned in the future.

Newspaper propaganda has been the result of the publishing of extravagant statistics of the Trenton Clinics, and a communication from Dr. Williams says that many letters are received by the National Committee for Mental Hygiene, asking us about Dr. Cotton's theories and treatment. I have already given you a summary of his reply. As to the reliability of Dr. Cotton's work, he says the work has never been brought to the notice of the Committee officially. Dr. Williams also states: "I have every reason to believe that no member of the Executive Committee has been convinced by the data of Dr. Cotton." From the summary given you in this brief paper of the leading psychiatrists and neurologists that I have communicated with, they practically convey to our British colleagues the opinion of the majority of the mental specialists of the U.S. and Canada, who are all interested in the outcome of so vital a subject.

The Reaction of the Blood to the Ingestion of Protein in the Psychoses. By F. R. MARTIN, M.B.Glasg., D.P.M., Assistant Medical Officer, Banstead Mental Hospital.

THE symptoms dealt with in psychological medicine are largely those of faulty adaptation to environment. Certification has as its basis abnormal reaction to stimuli requiring the more complicated responses of the organism. For many years pathological investigation of the psychoses was chiefly confined to *post-mortem* examination of the brain, but the activity of the brain is dependent on the functioning of the rest of the body, and of recent years research has been conducted on a wider basis.

Does the organism with abnormal reactions at a higher level show deviations from the normal at a lower level? The results of various investigations—those of basal metabolism and the blood-sugar curve as examples—tend to indicate that the response to stimuli at a vegetative level is distinctly abnormal in many cases.

In comparing reactions to any stimuli, something approaching experimental conditions must be aimed at if any deductions of value are to be made. This object is most easily obtained when the test is a simple one. It was this lack of complicated technique which especially recommended the test employed in this investigation.

Widal (1) and fellow workers experimenting on dogs observed changes in the blood which occurred after the ingestion of protein under certain conditions. During the digestion of proteins there is absorption from the intestinal tract, not only of amino-acids, but of earlier products of proteolysis. These substances pass into the portal vein, and Widal found that if the portal blood at this stage was diverted directly into the general circulation changes took place, which he described under the name of the "hæmoclastic crisis."

These changes were reduction of the refractive index, increased coagulability and a leucopenia. These symptoms were not produced by the portal blood of a fasting animal or of an animal fed with a protein meal if four hours had elapsed since the feed. These phenomena were believed to be due to the entry into the circulation of substances which, in the normal course of events, are fixed by the liver.

Widal decided to investigate the condition in clinical material and adopted the following method. The patient was required to have fasted for at least five hours before the test, and for preference since the preceding evening. The blood having been taken for examination 200 grm. of milk were given to the patient, and the

blood was again taken for examination at intervals of twenty minutes. At first the twenty-minute intervals were extended over three hours, but it was decided that for purposes of the test a period of one hour was sufficient. Of the various changes involving the refraction, coagulability and leucocytes, the leucopenia was considered to be the most constant, and the comparison of the numbers of leucocytes present before and after the ingestion of the milk was deemed sufficient to indicate a positive or negative result.

A positive result consisted of a leucopenia, which was usually present after an interval of twenty minutes and had reached its maximum twenty minutes later. It was found that the taking of the smallest quantity of food within five hours of the test invariably resulted in a negative reaction, even in those who had previously given a positive result.

Positive reactions to the test were obtained in various conditions.

A number of patients suffering from conditions associated with impaired liver function were examined. In cases receiving treatment by arsenobenzol compounds he found positive results—in many cases considerably prior to any other indication of liver disturbance. The same results were obtained in cases suffering from chloroform poisoning.

The reaction was investigated in various specific fevers, and positive results obtained in typhoid, pneumonia and scarlet fever, associated with urobilinuria and the presence of bile-salts in the urine.

The test gave positive results in certain conditions without other evidence of hepatic disorders. In pulmonary tuberculosis a positive reaction was found in cases showing signs of progressive disease, but not in those which were improving. In cases of diabetes and alcoholic peripheral neuritis similar results were obtained. Cases of appendicitis were examined, and found to give a positive result before operation, but a negative one after removal of the diseased organ.

Apparently contradictory results were obtained in cases of amœbic liver abscess where a negative reaction was found. Widal explained this by pointing out that destruction of liver function was only local in these cases, and that the undamaged parts are able to deal successfully with the products of digestion.

This experimental and clinical evidence led Widal to postulate a proteopexic function of the liver, whereby in normal circumstances toxic products of digestion were prevented from entering the general circulation. He believed that the production of a leucopenia after the ingestion of milk indicated a disturbance of this function.

Others workers have produced evidence to show that while

hepatic disturbance may be the cause of positive results in some patients, this is not the origin of the abnormal response in all.

Aubertin (2) has demonstrated the recurrence of hæmoclasia in tuberculosis without evidence of liver disorder.

Garrelon and Santenoise (3) published results showing the presence of hæmoclasia in cases with signs of vagotonia. Pagniez (4) produced a leucopenia by stimulation of the vagus. This occurred in both venous and arterial blood, showing that the result did not depend on purely local conditions. He concluded that the leucopenia observed during the hæmoclastic crisis is probably the result of a nervous mechanism, but is not purely vasomotor in origin.

Dr. Golla, at the Maudsley Hospital, has demonstrated by work the results of which are not yet published, that hæmoclasia may occur in cases of the psychoses and neuroses without any disorder of hepatic activity such as can be demonstrated by the most exhaustive tests of liver function.

So much for the history of the test. It was decided to investigate the reactions given by cases of the psychoses and neuroses, and under the guidance of Dr. Golla work has been carried out in the Maudsley Hospital and in the London County Mental Hospitals.

The clinical material was obtained in the London County Council Mental Hospitals at Colney Hatch, Long Grove and Banstead—that is, all the cases I examined were under certificate. The following are the results obtained from the examination of 72 cases suffering from various forms of the psychoses. In addition, in order to obtain controls, the reaction was observed in twenty male nurses at Long Grove—presumably healthy, and certainly without obvious disease.

The following technique was closely observed in every case :

The patient had no food on the morning of examination. Instructions were also given that no medicine of any kind was to be given on the day of the test, in order to prevent possible interference by drugs.

The blood required was obtained by a needle-stab from a different finger at each time of taking. This precaution was observed in order to prevent possible influence of the previous puncture in causing a leucocytosis. No antiseptic was used, in order to avoid chemical stimulation. It is essential, of course, to obtain a free flow of blood, and to avoid the necessity of mechanical stimulation, such as rubbing the finger.

These details are given in an endeavour to show that every effort has been made to exclude possible sources of error.

The counting of the leucocytes was done on an ordinary Thoma-Zeiss counting slide.

In each case the first specimen of the blood was obtained about 10.30 a.m. A preliminary sample was taken and then the 8 oz. of milk were given. Further examples of blood were taken for examination at thirty minutes' intervals after the milk had entered the stomach.

With a few exceptions, which are noted in the results, the patients were in no way resistive to the test, and the results in consequence were not influenced by any temporary emotional reaction. In the following results the reaction was described as positive when in comparing the leucocyte count made before taking the milk and that at thirty minutes a reduction in the number was observed.

TABLE I.—*Control Cases.*

Before.	After.	Result.	Before.	After.	Result.
1. 8,125	.. 10,625	Negative.	11. 3,750	.. 5,625	Negative.
2. 8,750	.. 11,562	"	12. 5,312	.. 6,250	"
3. 7,500	.. 9,062	"	13. 6,250	.. 6,250	"
4. 10,000	.. 12,187	"	14. 8,125	.. 9,375	"
5. 6,250	.. 8,125	"	15. 10,937	.. 13,125	"
6. 5,312	.. 6,562	"	16. 5,625	.. 8,750	"
7. 6,250	.. 6,562	"	17. 4,687	.. 6,562	"
8. 8,437	.. 8,750	"	18. 6,870	.. 7,187	"
9. 5,937	.. 6,502	"	19. 6,870	.. 5,937	Positive.
10. 7,500	.. 7,762	"	20. 5,625	.. 5,937	Negative.

Table I shows the results obtained in the examination of twenty male nurses. In nineteen of these cases a negative result was obtained. The case in which a positive reaction occurred is instructive, because this result was associated with a mild condition of collapse when the blood was taken at thirty minutes, and therefore with a condition of increased vagal control. These results are confirmed by those of other workers, and one is justified in stating that a leucopenia is an abnormal reaction to the test.

TABLE II.—*General Paralysis.*

Before.	After.	Result.	Before.	After.	Result.
1. 10,000	.. 10,312	Negative.	11. 10,000	.. 8,750	Positive.
2. 8,437	.. 8,750	"	12. 10,312	.. 9,375	"
3. 10,625	.. 11,250	"	13. 16,562	.. 7,187	"
4. 6,562	.. 10,000	"	14. 14,062	.. 13,937	"
5. 8,125	.. 9,687	"	15. 10,000	.. 6,870	"
6. 7,500	.. 8,125	"	16. 14,375	.. 11,250	"
7. 17,812	.. 19,987	"	17. 7,187	.. 5,937	"
8. 7,762	.. 8,437	"	18. 14,687	.. 10,000	"
9. 13,125	.. 7,762	Positive.	19. 8,750	.. 8,437	"
10. 9,062	.. 7,862	"	20. 9,375	.. 6,870	"

Twenty cases suffering from general paralysis of the insane were examined. The figures obtained are strikingly different from those in Table I. Only eight of the cases reacted in the normal way, whereas twelve gave a positive reaction. The initial leucocytosis

in many cases is, of course, not unexpected in cases of general paralysis. Widal, as already recorded, found that cases under arsenobenzol treatment gave positive reactions, but none of the patients in this series were under such treatment.

In comparing the cases giving a positive with those giving a negative result, it was found that the most demented cases were among the former, and the cases of definite remission were among the latter. Cases intermediate between these two states were found in both groups.

TABLE III.—*Dementia Præcox.*

Before.	After.	Result.	Before.	After.	Result.
1. 10,625 ..	8,437 ..	Positive.	6. 5,625 ..	5,000 ..	Positive.
2. 6,562 ..	4,687 ..	"	7. 5,625 ..	5,312 ..	"
3. 5,312 ..	5,000 ..	"	8. 6,562 ..	4,687 ..	"
4. 8,125 ..	4,687 ..	"	9. 6,870 ..	8,125 ..	Negative.
5. 5,000 ..	4,687 ..	"	10. 4,687 ..	4,687 ..	"

This table shows the result of an examination of ten cases suffering from dementia præcox. Of these, eight cases gave a positive result and only two a negative one.

Twenty-one cases suffering from this disease had already been examined, in which ten positive cases were obtained. Owing to the much higher percentage of positive results obtained by other workers, it was considered possible that the conditions of complete fasting previous to the test had not been observed—the smallest quantity of food will convert a positive into a negative result. Special precautions were taken in the second series of ten cases to prevent error from this source, with the results recorded.

TABLE IV.—*Insanity with Epilepsy.*

Before.	After.	Result.	Before.	After.	Result.
1. 5,675 ..	16,250 ..	Negative.	11. 10,937 ..	13,937 ..	Negative.
2. 8,125 ..	12,712 ..	"	12. 10,937 ..	14,062 ..	"
3. 4,375 ..	6,562 ..	"	13. 5,000 ..	10,312 ..	"
4. 6,870 ..	10,937 ..	"	14. 4,687 ..	7,500 ..	"
5. 13,125 ..	13,750 ..	"	15. 10,937 ..	21,562 ..	"
6. 11,250 ..	11,562 ..	"	16. 8,125 ..	7,500 ..	Positive.
7. 8,750 ..	9,687 ..	"	17. 10,312 ..	8,750 ..	"
8. 9,687 ..	12,500 ..	"	18. 10,625 ..	8,125 ..	"
9. 6,562 ..	8,125 ..	"	19. 5,937 ..	4,687 ..	"
10. 7,187 ..	10,625 ..	"	20. 5,937 ..	5,312 ..	"

In twenty cases diagnosed as insanity with epilepsy only five were found to give a positive result. The reaction did not have any relation to the number of fits or their recency. The positive results in two cases may have been due to definite organic disease, as one of these cases had chronic otitis media and the other was probably a case of early phthisis. Two of the positive cases showed

considerable confusion and dementia, and only one was capable of useful employment. Of the negative cases nine showed quite purposive reaction to their environment between fits, five were suffering from imbecility with epilepsy, and only one case showed a gross degree of dementia.

TABLE V.—*Cases showing Depression.*

Before.	After.	Result.	Before.	After.	Result.
1. 4,687 ..	8,125 ..	Negative.	7. 7,762 ..	10,000 ..	Negative.
2. 5,625 ..	7,500 ..	"	8. 12,187 ..	8,437 ..	Positive.
3. 6,870 ..	7,500 ..	"	9. 11,875 ..	10,625 ..	"
4. 9,375 ..	14,375 ..	"	10. 10,312 ..	8,750 ..	"
5. 7,187 ..	9,375 ..	"	11. 20,000 ..	13,125 ..	"
6. 10,312 ..	11,250 ..	"			

It seemed possible that a positive reaction might be associated with a depressed affective state. Eleven cases whose certification depended chiefly on depressive symptoms and which could not be placed in any of the above groups were examined. The results indicate that depression is not always associated with a positive reaction.

In the four instances where positive results were obtained the initial leucocyte count was above 10,000. One of these cases was a recent admission in a state of acute agitation; another developed symptoms of influenzal bronchitis on the day of the test and died of broncho-pneumonia some weeks later; a third had cut his throat a month previously and was recovering from a severe secondary anæmia. The fourth case was a senile one, and was frequently in bed as a result of faulty circulation. Only one of the negative cases exhibited an initial leucocytosis.

TABLE VI.—*Gross Brain Lesion.*

Before.	After 30 mins.	Result.
1. 6,875 ..	13,750 ..	Negative.
2. 5,887 ..	7,812 ..	"
3. 7,762 ..	12,187 ..	"
4. 2,500 ..	3,125 ..	"
5. 7,500 ..	8,437 ..	"
6. 9,687 ..	4,375 ..	Positive.
7. 15,625 ..	12,500 ..	"

Seven cases of insanity with gross brain lesion were examined. Two gave a positive result. It is interesting to compare these results with those obtained in general paralysis. There is much more widespread disturbance in the latter condition. All these cases displayed a degree of dementia, but were capable of some employment. One of the positive cases showed a marked leucocytosis. She had a severe cardiac condition, albumen in the urine, and the cerebral trauma was more recent than in the other cases.

TABLE VII.—*Alcoholic Dementia.*

	Before.		After 30 mins.		Result.
1.	4,687	..	11,875	..	Negative.
2.	5,312	..	6,562	..	"
3.	9,687	..	16,870	..	"
4.	9,375	..	7,187	..	Positive.

Four cases suffering from alcoholic dementia were examined. Only one of these gave a positive result. She was the only case with a history of peripheral neuritis, although the acute symptoms had cleared up when the test was performed.

In the series of seventy-two cases of the psychoses thirty-two were found to give a positive reaction to the test. A leucopenia does not appear to occur in health, but it is not always present in the psychoses.

Comparing the results obtained in the different clinical divisions, one finds that 60 *per cent.* of cases of general paralysis of the insane give a positive reaction. The cases of dementia præcox gave a positive result in 80 *per cent.* of the number examined. This result is in agreement with those obtained by others. In the two classes where purposive reaction of the organism is almost completely absent are found the largest number of positive results. Moreover, in the cases of general paralysis those with a definite remission were all on the negative side, and those showing rapid progress and marked degrees of helplessness were on the positive side.

Cases in the epileptic group are very often capable of useful and purposive employment, even although their condition has progressed far enough to require certification. Between fits they may show little abnormality in behaviour. Only five out of twenty cases gave a positive reaction in this class.

The investigation of cases showing depression does not produce evidence to indicate that the emotional state is correlated with the reaction.

The cases of gross brain lesion and of alcoholic dementia show only a small percentage of positive results. The former condition is due to a local lesion, and very often after admission to hospital progress towards dementia is very slow. In the alcoholic group the patients had all been separated from the exciting toxin for some years.

Comparing these results with those obtained in other conditions, it is found that all the positive results reported have occurred in association with diseases which are especially those causing a general disturbance of metabolism. Such are arsenobenzol and chloroform poisoning, fevers such as typhoid, pneumonia and scarlet fever, and tuberculosis, diabetes and alcoholic neuritis.

The results of work published by various workers have been quoted to indicate that positive results depend on disordered functioning of the vegetative nervous system. Investigation at the Maudsley Hospital has tended to confirm this. The results of this much larger investigation will probably be published shortly, but the results obtained in this series of cases would indicate that there is, in the psychoses, a tendency to disturbance of the vegetative nervous system, and that the disturbance holds some relation to the severity of the symptoms.

I desire to express my thanks to Dr. Golla, at whose suggestion this research was carried out, and whose advice and guidance have rendered it possible. My thanks are due also to the Superintendents of Colney Hatch, Long Grove, and Banstead Mental Hospitals for permission to carry out these tests.

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Some Notes on Encephalitis Lethargica.⁽¹⁾ By ROBERT MARSHALL, M.D., F.R.C.P.I., D.P.H., Belfast.

THE following notes are derived from the case-records of the Royal Victoria Hospital, Belfast, by kind permission of the medical staff, and are placed before you on the suggestion of Col. Dawson. They are an analysis of a series of 42 cases of encephalitis lethargica treated as in-patients of the Hospital between October 5, 1918, when the first case was admitted, and December 31, 1923. Of these 42 patients, 14 died in hospital, and of 28 who survived 2 died within a year of leaving hospital; 18 replied either in person or by letter to my circular letter of inquiry, and I was unable to trace the remainder.

The age, sex, year and seasonal distribution of these cases is stated in the table before you, from which it will be seen that the majority of cases occurred in the second decennium, but that no age-period is exempt. This corresponds closely to the English

⁽¹⁾ A paper read at the Annual Meeting held at Belfast, July 3, 1924.

figures, published in the Report to the Ministry of Health in 1922, where 25 *per cent.* of cases occurred between 10 and 20 years.

The male sex suffered more severely than the female, there having been 30 male cases with 11 deaths as compared with 12 female cases with 3 deaths. This contrasts with the English figures, which show almost equal incidence on the sexes, but confirms Schulze's (1) figures of American cases, where the majority were males. There was 1 case in 1918, there were 2 in 1919, and in 1920 there arose a much more definite outbreak: 19 cases were admitted to the Royal Victoria Hospital, of whom 6 died. Three cases in 1921 and only 1 in 1922 showed a marked lull, followed by a rise to 16 cases in 1923, of whom 7 died in hospital.

These cases did not represent the whole incidence of the disease in the city during these years, as the deaths reported from this cause in the County Borough of Belfast (2) are as follows:

1918	3 deaths.
1919	7 „
1920	24 „
1921	5 „
1922	3 „
1923	20 „

Again I think it may be said that in many of these cases the diagnosis presented unusual difficulty, and for that very reason they were sent to the Royal Victoria Hospital for investigation.

The death-rate for the 42 cases was thus $33\frac{1}{2}$ *per cent.*, if we exclude the 2 patients who died some months after leaving hospital, and in whom I cannot be certain that the deaths were due to encephalitis.

The death-rate in the 1,723 cases investigated by McNalty, Parsons and Perdrau (3) was 48.3 *per cent.*; the French death-rate (4) in 1920 was $33\frac{1}{2}$ *per cent.* The American Commission (5) states that the deaths in the acute stage varied from 10 to 20 *per cent.* The present epidemic in Belfast has so far given rise to 211 cases with 17 deaths (June 21, 1924).

The seasonal incidence shows a contrast to that found in the English records; our worst months were April, May and June, and this is again noticeable in 1924; in England, certainly until 1922, the worst month was January.

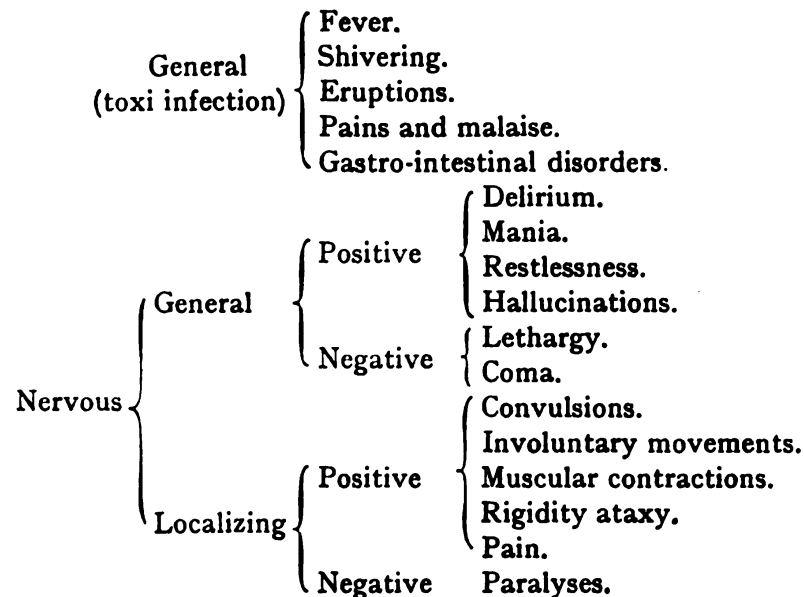
I have not found any evidence of contagion amongst these cases, and in my circular letter to survivors, the question, "Has there been any other person in your family, or living in the same house, who has suffered from a similar attack to yours?" has always been answered in the negative. This only proves, I fear, the inadvisability of forming a conclusion on the analysis of too short a

series of cases ; as the English report states—" If, in amount, the evidence concerning the contagiousness of encephalitis lethargica is small, it may be said that some of it at least is good." Netter (4), of Paris, found evidence of contagion in 4.6 *per cent.* of cases in the 176 which he personally investigated.

SYMPTOMATOLOGY.

I am at a loss to give you any clear and succinct account of the clinical condition of these 42 patients. As Achard (2) says, " The clinical diversity is such that not only can two patients present no apparent resemblance, but more, in the same patient, at different phases of the malady, one would be inclined to believe in several successive illnesses."

To classification of types of encephalitis there is no end. Cruchet (7), for example, recognizes nine types. The American Commission (5) recognized ten. Walshe (8) in 1921 deplored the multiplication of such classifications, and suggested analysis of the symptoms on the following schema :



In Walshe's own words : " The terms positive and negative are employed in the sense in which Hughlings Jackson originally used them ; positive symptoms being the expression of exalted function either from irritation or from loss of higher control, and negative symptoms expressing loss or depression of function from destruction of nervous structures or otherwise."

I have accordingly attempted to work on such a plan and have embodied my results in a tabular statement.

The diagram shows the comparative incidence of the principal symptoms as recorded in the Royal Hospital series of 42 cases as compared with the Ministry of Health series of 1,264. It is, I think, rather remarkable that for the most part the figures should be so alike, the figures for complete coma, and the death-rate in comatose cases and those for delirium being particularly striking.

It is noteworthy, I think, that the average highest recorded temperature among the surviving cases was 99.2° , whereas the average highest recorded temperature among the fatal cases was 102.7° . Of these 14, 13 died during a rise of temperature, in several cases amounting to a definite hyperpyrexia. This terminal hyperpyrexia is a frequent feature of encephalitis lethargica, and has been described (9), but has not perhaps been sufficiently emphasized Hume and Shaw (10), in their analysis of 20 cases in 1922, note that 3 of the 4 fatal cases died in hyperpyrexia. I think that if one's encephalitic patient shows a definite tendency to a secondary rise of temperature the prognosis is decidedly changed for the worse. There was no case of "inverted" temperature in the series. Skin eruptions were more common than I had suspected—a transient erythema was the most usual. Profuse sweating could not always be accounted for by any therapeutic effort, such as aspirin or salicylic acid. I take it that the severe pains so commonly complained of are due to the peripheral nerve and root involvements which have been the subject of inquiry by Kennedy and Abrahamson. (5)

Insomnia occurred in 42 *per cent.* of the fatal cases as compared with 14 *per cent.* of the survivors, and was in 4 cases on onset phenomenal. One seems to have seen many more of these cases of what might be called a hyposomnic onset in the 1924 epidemic than formerly; this may be due to earlier recognition of symptoms by the patient himself, or possibly to the variation which is said to occur between one epidemic and another.

Lethargy, not deepening to coma, occurred in 54.7 *per cent.* of cases, and actual coma in 23.8 *per cent.*

Involuntary movements present one of the most difficult problems in this disease, as they may vary from time to time in the same patient. The choreiform type is recorded in 11.9 *per cent.* of cases and some form of muscular twitching in 45 *per cent.* These figures do not present any marked difference from the English figures, and this also applies to the proportion of cases in which rigidity was noted (2.3 *per cent.*). A glance at the diagram shows that the foregoing symptoms and signs occurred with extraordinary similarity in the large series (1,264 cases) as compared with the

small series at present under review. This is not the case in the last lines of the diagram, and I can offer no explanation of why paralysis of one or more limbs was noted in 9.5 *per cent.* of the Royal Hospital series as compared with 61 *per cent.* in the larger group.

I have constructed a similar table to place quickly before you the comparative incidence of the ophthalmological signs; and for comparison I have included the results of the series of 1,152 cases recorded in the Ministry of Health monograph, and in 100 cases personally investigated by Dr. Ward A. Holden at the Mt. Sinai Hospital. Ptosis was apparently not so frequently noticeable in the Royal Victoria Hospital cases, but on the other hand diplopia was recorded in 45 *per cent.*; strabismus in 11.9 *per cent.* and nystagmus in 9.5 *per cent.* Of 234 cases analysed in the English Report, 5.5 *per cent.* showed true optic neuritis and 19 *per cent.* showed signs portending the same. Optic neuritis occurred in 11.9 *per cent.* cases in the Royal Victoria Hospital series, and the observation has this value that it was made or confirmed in each case by an ophthalmological specialist.

As in the English series, these figures were thought to be high and the case-notes were carefully considered, but in each case the diagnosis of encephalitis was made on ample clinical grounds. There is no record of any case showing optic atrophy. Loss of the light reflex, loss of accommodation reflex, and loss of both, are each recorded in 7 *per cent.* of the cases.

It will thus be seen that fever, headache, lethargy, involuntary movements and diplopia are the most frequently noted symptoms, and I share the opinion expressed by Hall (11) and others that marked "general" signs are of worse import than marked "localizing" ones.

CEREBROSPINAL FLUID.

The cerebrospinal fluid was examined in 12 non-fatal cases and in 8 fatal cases. The cell-count varied from 0 to a maximum of 36 (in a fatal case diagnostically confirmed by autopsy). There were no constant changes to Lange's test. The most constant feature was the increased sugar content; in the earlier cases the test was not made quantitatively, but this was done in the later cases. In the fatal cases the highest figure was 0.13 *per cent.* and the lowest 0.076 *per cent.*, with an average of 0.108 *per cent.*; in the non-fatal cases the highest figure was 0.11 *per cent.* and the lowest 0.07 *per cent.*, with an average of 0.086 *per cent.* Thus the average sugar content was higher in the fatal than in the non-fatal cases.

Dr. John A. Smyth, of the Bio-Chemistry Department, has supplied me with a longer series of figures, based on 42 cerebrospinal fluids examined by him between January, 1923, and June, 1924, the cases having been clinically diagnosed encephalitis lethargica in various hospitals or private practice.

The highest sugar content was 0·18 *per cent.*, the lowest 0·067 *per cent.*, the average 0·082 *per cent.*, and only 3 of the series were below 0·075 *per cent.* Achard explains the diminished sugar content of meningitis as due to the activity of the microbes inflaming the meninges, and argues conversely that in encephalitis there is a virus with greater affinity for the nervous tissues than for their coverings—a disease process in which microbic action is very slight or absent.

Whether this is a complete explanation is doubtful, but at least a raised sugar content appears to be of considerable diagnostic significance.

POST-MORTEM RESULTS.

In 6 of the 14 cases which terminated fatally permission was obtained from the relatives that a *post-mortem* examination should be made. The results may be briefly tabulated thus:

Case D. 7: "Surfaces of both hemispheres showed small punctate hæmorrhages . . . choroid plexus markedly congested."

Case D. 6: "Acute congestion of surface of brain . . . congestion of vessels, most marked over occipital lobes . . . medulla and pons mottled with small punctiform hæmorrhages."

Case D. 5: "Punctate hæmorrhages of dura mater mainly in region of Sylvian fissure; marked reddening of pituitary. Petechial hæmorrhages of heart and diaphragmatic surface of right lung."

Case D. 4: "Small punctate hæmorrhages of medulla and pons . . . hæmorrhagic areas stomach and base of left lung."

Case D. 8: "Puncta cruenta in white matter of both hemispheres particularly well marked . . . pituitary surface normal, but markedly redder on section."

Case D. 9: "Petechial hæmorrhages in cerebrum, cerebellum and pituitary body."

AFTER-HISTORY OF SURVIVORS.

Of the 28 survivors 18 replied either by letter or in person to my *questionnaire*. Six of the 18 now show a definite Parkinsonian syndrome, and all without exception complain of impaired health; "general weakness" is almost an invariable complaint, and 4 of

the 12 specifically mention recurrent violent headache. One complains still of drowsiness, another of sleeplessness; 1 of twitching of her face; 2 complain of pain and weakness in arm and legs respectively. Two complain of speech defect, and one of these is, to my mind, worthy of special mention. Case C. 6, a woman *æt.* 40, was admitted to hospital in April, 1923, with a provisional diagnosis of uræmia. Her history was of a sudden attack of unconsciousness; she showed Cheyne-Stokes' breathing and was comatose on admission. There was albuminuria and there were hæmorrhages at the left retina, but her blood-urea content was 29 mgrm. per 100 c.c. and her urea concentration 2·7. There was marked twitching of the left arm. Her C.S.F. sugar content was 0·09 *per cent.* She rapidly improved and left hospital four weeks later, and when she reported in December I could find no physical signs of disease: her discs and retinae were normal, and there was no albuminuria. She complained of being less fit for household duties, and of attacks of inability to speak: "I know rightly what's going on, but I couldn't utter a word to save my life." These attacks last for 20-30 minutes, and may recur once in a month or once in three months; she states that she is mentally clear during the attack.

Of the 6 with Parkinsonian signs 3 are noteworthy:

1. Case B. 3: Has the slow gait, rigid tremulous hands and mask-like face of the disease, but to my surprise his brother who brought him to hospital informed me that he earns his living as proprietor of a billiards saloon with three tables, and is capable of making a 40 "break."

2. Case A. 9 was *æt.* 16 at the onset of his attack in 1920, and was readmitted a year later suffering from paresis of his right arm, difficulty of speech and a return of his lethargy. His doctor reports to me (June, 1924) that he was of normal mentality before his illness, but is now mentally "simple," and at the age of 20 can earn only a slender wage delivering papers for a newsagent, and has well-marked Parkinsonian signs.

3. Case A. 4, whose age was 14 at the onset of his illness, shows the mask-like face, but his tremor mainly, if not altogether, involves his left side, and is so marked as to render him incapable of any accurate movements.

Of the remaining 3 Parkinsonian cases, 2 are in the Union Infirmary and all are incapable of work.

There appears to be no definite relationship between the intensity of the attack and the risk of development of the Parkinsonian syndrome; some of these Parkinsonian patients appear to have had typical but on the whole no more severe attacks than some who have recovered to a much greater extent. This confirms the

view expressed by Hall (11) and others. The interval between the acute illness and the development of the syndrome also varies: one youth left the Royal Victoria Hospital in May, 1923, and on admission to the Union Infirmary in December, 1923, stated that he had never been able to go out of doors himself "for fear he would walk into something"; and I have within the past month seen a patient who had an acute attack in May, 1920, and who for three years and nine months later developed a coarse tremor of the left arm, which is probably a late sequela.

DIFFERENTIAL DIAGNOSIS.

The diagnosis of encephalitis may, in the majority of cases, be made on the clinical picture which the patient presents, combined with his history, even before the result of analysis of the C.S.F. is available. Prof. Hall (11), in his recently published book, gives a list of twenty-one conditions for which it may be mistaken.

Two additional conditions are diabetic coma and localized tetanus.

Glycosuria is not an uncommon phenomenon in encephalitis, and of course the disease may occur in a diabetic subject.

A. B—, æt. 66, was admitted to the Royal Victoria Hospital in May of this year complaining of thirst and of increasing weakness for three weeks; he also complained of diplopia, and there was slight generalized muscular twitching. His speech was indistinct and his cerebration slow. His urine contained sugar, acetone and diacetic acid. His case was considered *not* to be one of incipient diabetic coma on the following grounds: He had no "air-hunger," his skin was moist, his pulse full and bounding; there was no diminution of globular tension. His blood-sugar was 0.40 *per cent.*; his C.S.F. sugar 0.26 *per cent.* The acetonuria cleared up in five days on 10 units of insulin per day, and he remained free from acidosis, but he died comatose on the ninth day. Unfortunately a *post-mortem* was negatived by the relatives.

J. F—, æt. 48, was admitted to the hospital in April of this year, suffering from intensely painful spasmodic contractions of his abdominal muscles, particularly on the right side; these contractions lasted about one second and recurred at varying intervals, usually about three seconds in duration. He had had a boil on the left buttock some fourteen days before admission, but this was healed. A provisional diagnosis of localized tetanus was made and energetic treatment with anti-tetanic serum was instituted. On physical examination little was detected except the abdominal condition. His right knee-jerk was brisker than his left, and sudden extension of the right leg caused painful spasms of the right thigh. There was some rigidity of his back. There was no trismus, and there

were none of the ocular signs of lethargic encephalitis. His C.S.F. sugar content was 0.087 *per cent.* and otherwise normal—no tetanus bacilli, negative Wassermann and Dreyer, Lange, cells and globulin. His condition slowly improved, the spasms becoming less frequent and severe, but when he left hospital he still suffered from occasional slight attacks, and he is still unable to resume his duties as an asylum attendant.

The points in favour of a diagnosis of tetanus are: The peculiarly severe character of the spasms and the occurrence of a septic focus a fortnight before (staphylococci are said to have the property of lighting up latent tetanus).

On the other hand, the cerebrospinal fluid findings, the prevalence of epidemic encephalitis, the occurrence of the spasms in the abdominal muscles, leaving the site of the boil unaffected, the absence of trismus and the doubtful response to large doses of serum are in favour of a diagnosis of encephalitis lethargica in an atypical form.

	1918.	1919.	1920.	1921.	1922.	1923.
Total cases	1	2	19	3	1	16
Died in hospital		1	6			7
Died after leaving hospital					1	1
Replied to circular		1	8	1		7
Unable to be traced	1		5	2		1
Males		1	15	2		12
Females	1	1	4	1	1	4
Ages 0-10						1
10-20		1	2	2		4
20-30		1	1	6		1
30-40			1	2	1	3
40-50	1		1	2		1
50-60			1	1	1	3
60-70						
Season—January to March		1	1	1		8
April to June			17	2		4
July to September			1		1	4
October to December	1	1				

Fatal cases are indicated by **black figures**.

Average duration of illness in fatal cases, 25.3 days.

If one unusually prolonged case is excepted, 13.4 days.

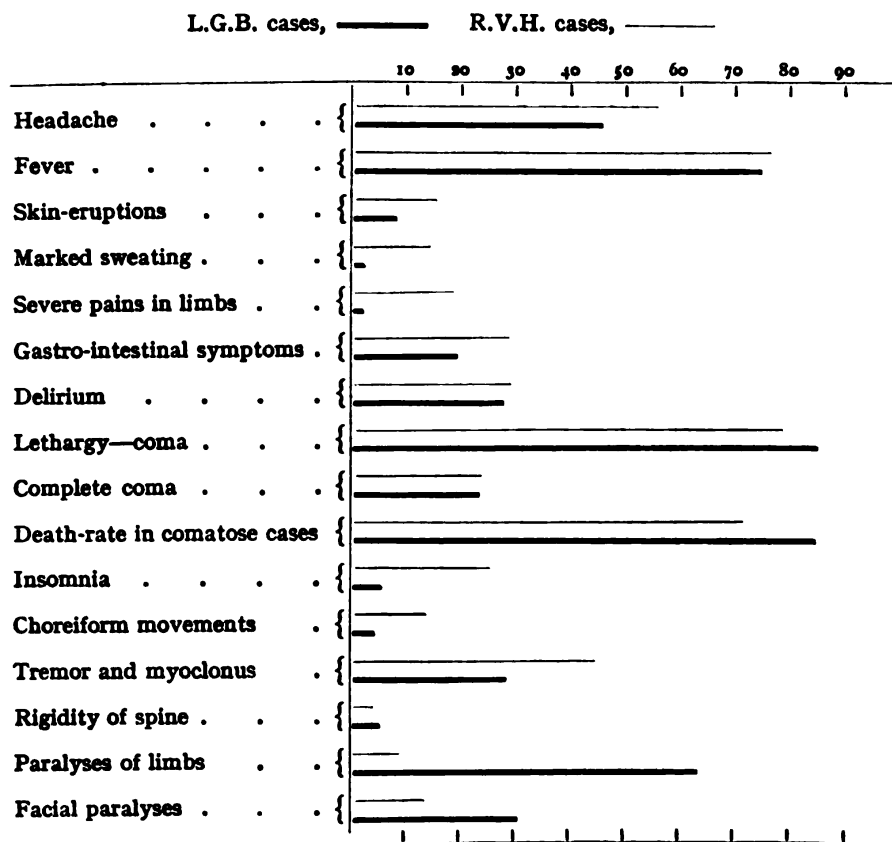
Average period in hospital of fatal cases, 5.2 days.

The occurrence of such a case as this raises the question whether the cases described as localized tetanus in the past have not in some cases been manifestations of lethargic encephalitis. In his article on "Tetanus," published in 1916, Browning (12) quotes Evler as stating that amongst others the following are early symptoms of tetanus: Restlessness, changing to a desire to rest; sleeplessness and, it may be, nightly delirium; profuse sweating; darting pains in various parts; and, as later symptoms, nystagmus, strabismus, tremors and painless clonic spasms. All of these are, in the light of our recent experiences, highly suggestive of encephalitis lethargica.

MENTAL AFTER-EFFECTS.

I do not feel qualified to deal with this aspect of the problem, but I could find no evidence of well-marked mental defect in any of the 18 cases I have traced, except in the case of the newsvendor's messenger already quoted.

Percentage of Cases in which Specified Symptom was recorded.

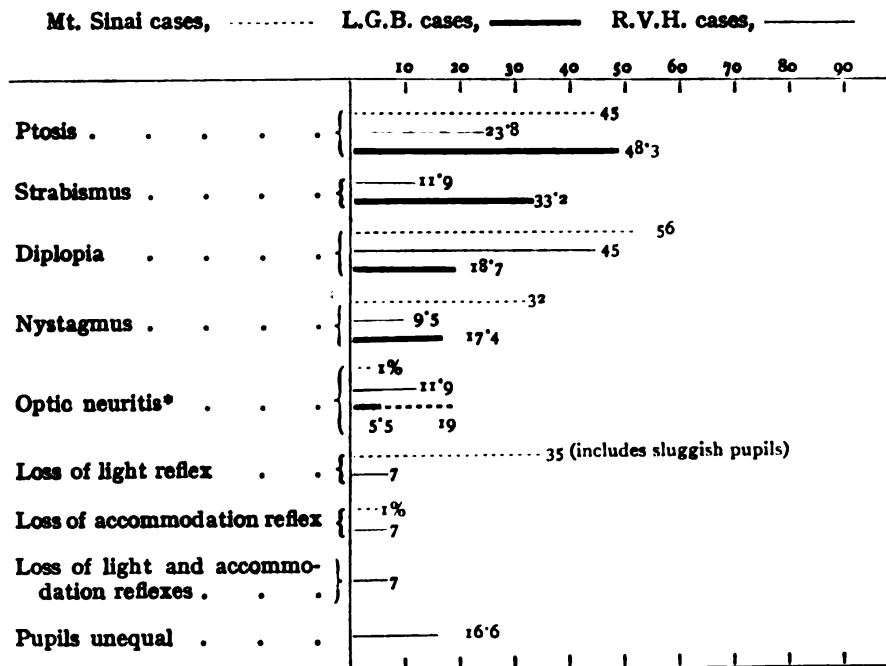


I was interested to note in the report of Inspectors of Lunatics, Northern Ireland, for 1922 (13), that in no case had this disease been regarded as the cause of a patient's insanity. By Col. Dawson's permission I addressed a circular letter to the Medical Superintendent of each of the six asylums in Northern Ireland, but apparently there has so far been no admission to any of these institutions as a result of encephalitis, with the exception of one man with a very bad mental family history who was admitted to Downpatrick Asylum under the care of the President, suffering from acute encephalitis with marked mental symptoms. In England Prof. Hall reports that 30 mental cases of encephalitic origin have been admitted to asylums between 1918 and the end of 1922.

Apart from what one may term certifiable insanity, many of these patients are psychically the worse for their experience; they are for the most part depressed, as indeed their impaired health gives them reason to be. I have seen no case of euphoria as an after-effect.

The worst mental effect of the disease is undoubtedly on children, Wimmer (14) reports that 12 out of 25 children were mentally affected.

Percentage of Cases in which Specified Symptom was recorded.



* "In 5.5 per cent. of the cases in which the fundi were examined optic neuritis was present, while in 19 per cent. of these were present one or more signs portending the same."—*Ministry of Health Report*, p. 84.

the most usual sequela being perversion of conduct. Inquiry amongst my colleagues leads me to believe that such cases are not unknown in Belfast, as in other cities. These patients present a problem both to their parents and to the State, and are potential recruits for the criminal lunatic asylums. I wonder how soon a past attack of encephalitis will be urged as a defence on a criminal charge!

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The Colloidal Gold Reaction with Cerebrospinal Fluid. By THOMAS HOUSTON, O.B.E., M.D., and EDWARD ARMSTRONG, M.B., from the Laboratory of the Royal Victoria Hospital, Belfast.

THE history of the colloidal gold reaction is one of great interest.

In 1901 Zsigmondy used the precipitation of colloidal gold by proteins as a means of determining quantitatively their amount in given solutions. He discovered that solutions of protein give protection to colloidal solutions of gold up to a certain point, and he determined the so-called goldzahl for various protein substances, by which is meant the number of milligrammes of protein employed, just sufficient to prevent the precipitation of 10 c.c. of colloidal gold of a percentage of .0053 in the presence of 1 c.c. of 10 *per cent.* sodium chloride. By this method it can be determined whether a given protein is absolutely pure, or, granted that this is the case, how much of the protein is present in a given solution.

In 1912 Carl Lange (1) endeavoured to apply this method to the study of the proteins in cerebrospinal fluid, and discovered that, instead of securing protection, quite the reverse occurred, and that this was especially true with the cerebrospinal fluid derived from patients with syphilitic disease of the central nervous system. Without coming to any certain conclusion about the cause of this aberrant phenomenon, he suggested that this method could be used as a means of diagnosing syphilitic from non-syphilitic cerebrospinal fluid.

In 1914 Miller and Levy (2), from the Johns Hopkins Hospital, emphasized the fact that the precipitations of colloidal gold by cerebrospinal fluids from cases of tabes and general paresis differ in a fundamental manner, so that the test could be used, not only to differentiate syphilitic from non-syphilitic conditions, but also to distinguish general paresis from tabes and cerebrospinal syphilis.

In 1914 Kaplan published his classical work on *The Serology of Nervous and Mental Diseases*. He investigated the colloidal gold reactions of many cases from the Neurological Institute in New York, and confirmed the results obtained in general paresis and cerebrospinal syphilis, but his cases of pure tabes showed either no reaction, or a very slight, insignificant change in the colloidal gold. He, however, emphasized the fact that in early tabo-paresis the paretic curve seemed to herald the symptoms of general paresis.

In 1915 Miller, Brush, Hammers and Felton (3) continued at the Johns Hopkins Hospital the work of Miller and Levy, and gave precise directions for the preparation of the colloidal gold. They differed from Kaplan in the curves which they obtained in cases of tabes.

In 1917 Hammes (4) regards the test as more delicate than any other as an index of pathological change in the cerebrospinal fluid.

The mechanism of the reaction has been subject to much investigation. Weston (5) showed that the substance producing the reaction is not the same as the Wassermann body.

In 1917 Felton (6) considered that the various types of reaction could best be explained by the antagonistic precipitating relations of albumen and globulin, the albumen exerting an inhibitory reaction, and the globulin a precipitating reaction.

In 1920 Cruickshank (7) put forward this same hypothesis independently. He assumed that the syphilitic reactions are in part due to the presence of albumen, sufficient in quantity to partially obscure the precipitating effect of globulin, and in part due to a specific alteration in the physical state of the globulin, which is associated with a positive electrical charge.

The great crux of this valuable reaction is the extreme difficulty

of making a satisfactory preparation of colloidal gold. This difficulty, no doubt, accounts for the fact that this reaction is not so generally used as it ought to be. Many serologists have spent much time and labour in futile attempts to prepare the test solution. We also think it possible that some of the results obtained, and the differences that have been recorded—for instance, in cases of pure tabs—may be due to the fact that the colloidal gold preparations used by different workers were not quite similar. This subject has been brought into relief by a valuable paper published in 1923 by Mellanby and Anwyl Davies.(8) They show that the exact reaction of the colloidal gold solution is a matter of great importance, and that by varying the reaction very slightly, great differences in the curves may be obtained. Thus, a normal fluid, if the reaction of the gold sol be faintly acid, will give the curve of cerebrospinal syphilis, and, if it be made more acid still, the curve of general paresis. In the published directions for the preparation of the test solution, only a few workers give any direction with regard to this essential point. Miller, Brush, Hammers and Felton recommend that the solution be titrated with alizarine red, and that the final product must be absolutely neutral, but the "change point" of alizarine red lies to the acid side of the strictly neutral point.

Cruickshank points out that an acid sol is very sensitive and an alkaline sol is insensitive, and, at his suggestion, Scott titrates his sols with bromo-cresyl purple, and brings them to a pH. of 5.5. Such a sol may, we fear, be dangerously acid, and too sensitive.

We have tried a number of the methods suggested, and found it almost impossible to get constant and reliable results. The solutions prepared on exactly similar lines seem to differ greatly in their sensitiveness, so that comparable results seem hardly possible. Since reading the paper on Mellanby and Anwyl Davies, and using their method, our results have been much more satisfactory. Any method of titrating colloidal gold seems very difficult, first, because of the red colour of the product; second, because the absorption of CO_2 from the air markedly interferes with the reactions. Thus, distilled water shaken up in the air or exposed for some time becomes distinctly acid to the usual indicators.

The method suggested by Mellanby and Anwyl Davies obviates this difficulty. Instead of using alkali and acid in making the colloidal gold solution, they use neutral potassium oxalate alone. Thus, if all the solutions be exactly neutral, the finished product must also be neutral.

In using this method we have found that the most essential point is the preparation of the distilled water.

Details of the Examinations of the Cerebrospinal Fluid in Cases giving a Paretic Curve.

Date	Name	Fluid Wassermann 1 in 1 in 2.5 in 5	Sigma Units.	Cells per c.m.m.	Globulin.	Glucose	Celluloid Gold	NOTES
19/12/22	M. (3021)	X X X X X X	4.6	8	X	X	555321100	Stuttering speech, easily aroused—tremor of lips. A.R. + K.J.s normal C.P.I.?
19/1/23	H. (4)	X X X X X X	2.2	8	X	X	8530000000	Incontinence of urine, loss of memory, anaesthesia of skin. Suggests K.J.s A.R. + treatment with N.A.B. & mercury begun
11/2/23	H.	X X X X X X	8	16	X	X	4311000000	Before infection with malaria.
20/2/23	H.	X X X X X X	1.9	13	X	X	8221100000	Symptoms greatly improved after malarial treatment.
9/4/23	T. Ward VI.	X X X X X X	4.8	13	X X	0.18%	435143000	Dizziness and headache of 7 weeks' duration, difficulty of speech, parietal, frontal and occipital lobes.
4/1/24	T. Ward VI.	X X X X X X	1.7	5	X	X	665531000	Right-sided hemiplegia, mental symptoms greatly improved.
1/4/23	Ward VI.	X X X X X X	30.2	60	X	X	5536110000	History of syphilis, epileptiform attacks, coma, died. Supposed Gummata of brain.
24/1/24	W. (P.V.C.)	X X X X X X	4	124	X X	X	5555543200	General Paralysis.
25/2/24	W. (P.V.C.)	X X X X X X	1.7	34	X X	X	6655543100	General Paralysis after malarial treatment.
26/1/24	B. (P.V.C.)	X X X X X X	6	7	X X	X	5555543100	General Paralysis.
22/2/24	B. (P.V.C.)	X X X X X X	1.5	55	X X	X	5555543100	General Paralysis.
1/2/24	M. (P.V.C.)	X X X X X X	2	99	X X	X	5555543100	General Paralysis.
1/6/24	M. (P.V.C.)	X X X X X X	10	99	X X	X	5555543100	General Paralysis.
1/6/24	M. (P.V.C.)	X X X X X X	4.4	13	X X	X	4655431100	General Paralysis.
1/6/24	P. (P.V.C.)	X X X X X X	2.1	37	X X	X	5555543100	General Paralysis.
1/6/24	P. (P.V.C.)	X X X X X X	9.1	37	X X	X	5555543100	General Paralysis.
1/6/24	B. (P.V.C.)	X X X X X X	8	30	X X	X	5555543100	General Paralysis.
1/6/24	L. (P.V.C.)	X X X X X X	1.7	33	X X	X	444321100	General Paralysis.
26/2/24	Ward II	X X X X X X	1.4	33	X X	X	444321100	General Paralysis.
4/3/24	A. (1005)	X X X X X X	0	4	X	X	444321100	Tabes.
4/3/24	D. (5317)	X X X X X X	0	4	X	X	444321100	K.J.s—weakness of left leg. K.J.s + subtle clonus tremor, eyes sluggish but react to light, K.V. 9/8 margin of disc blurred, vessels normal. L.V. hand movements—old infarct—posterior synechiae—choroido-retinitis
13/3/24	McG. Ward 22	X X X X X X	6.1	20	X	X	5555543200	Right sided hemiplegia.
22/3/24	L. (P.V.C.)	X X X X X X	2	79	X X	X	5555543100	General Paralysis.
22/3/24	McN. (P.V.C.)	X X X X X X	2.9	122	X X	X	5555543100	General Paralysis.
12/4/24	H. Ward V	X X X X X X	0	12	X X	X	444321100	Cerebral syphilis.
17/4/24	W. Ward 25	X X X X X X	4	26	X X	X	5555543210	Weakness and tingling in arms. Delusion of persecution (G.P.I.)
17/4/24	R. (P.V.C.)	X X X X X X	10	28	X X	X	5555543210	General Paralysis.
17/4/24	O'H. (4100)	X X X X X X	1	37	X X	X	5555543210	General Paralysis.
27/4/24	M. (P.V.C.)	X X X X X X	5.3	24	X X	X	643221000	Hemiplegia for 15 months.
15/1/24	M. (P.V.C.)	X X X X X X	8	28	X X	X	5555543210	General Paralysis.
2/5/24	McC. (P.V.C.)	X X X X X X	6.7	40	X X	X	5555543210	General Paralysis (after malaria).
11/6/24	McD. (P.V.C.)	X X X X X X	9.1	90	X X	X	5555543210	General Paralysis.
19/6/24	McD. (6002)	X X X X X X	9.1	90	X X	X	4443210000	General Paralysis.
22/6/24	R. (23)	X X X X X X	0	3	X	X	4443210000	A.R. + K.J.s—Romberg + Tabes. Disseminated Sclerosis.
14/12/23	W. (P.V.C.)	X X X X X X	2.1	107	X	X	5555543210	General Paralysis.
16/1/24	P. (P.V.C.)	X X X X X X	2.1	30	X X	X	5555543210	General Paralysis.
15/1/24	McW. (P.V.C.)	X X X X X X	3.9	23	X X	X	5555543210	General Paralysis.
15/1/24	R. (P.V.C.)	X X X X X X	49	56	X X	X	5555543210	General Paralysis.
15/1/24	O'N. (P.V.C.)	X X X X X X	7.3	56	X X	X	5555543210	General Paralysis.
15/1/24	I. (P.V.C.)	X X X X X X	9.1	57	X X	X	0005432210	General Paralysis—not typical.

The cases marked P.V.C. were sent for examination by Dr. Norman Graham from Purdysburn Asylum. A number of these cases were treated by infecting the patients with malaria. Cases marked (1) and (3) are before and after treatment with tertian malaria.

The other cases detailed occurred among 150 complete examinations of the cerebrospinal fluid of patients either attending the Venereal Clinic or in the wards of the Royal Victoria Hospital.

We use an all-glass still without any rubber connection. It would probably be even better to use a condenser with the central tube made of block tin, so as to prevent any absorption of alkali from the glass. Ordinary laboratory distilled water is taken, and a small quantity of carbonate of soda is added (1 grm. to the litre), and the water is re-distilled into a hard glass container which is scrupulously clean. The first 10 *per cent.* of the distillate is rejected, and the last 10 *per cent.* of the water left undistilled. This second distillate is then distilled a third time in exactly the same way, but without any carbonate of soda.

The other important point is that all the flasks and pipettes used should be absolutely clean and used for no other purpose.

It will be found that distilled water prepared in this way is absolutely neutral at the boiling-point, though it will, of course, absorb some CO₂ if left standing for any length of time.

With such precautions we have found that this method gives almost constantly a solution of colloidal gold of remarkable uniformity.

CONCLUSIONS.

1. The method described by Mellanby and Anwyl Davies is a satisfactory way of preparing neutral colloidal gold.
2. The so-called paretic curve is very characteristic of general paresis, but may occur occasionally with the cerebrospinal fluid from cases of cerebrospinal syphilis, and very rarely in that of disseminated sclerosis.
3. The number of sigma units in the fluid from cases of general paresis or cerebrospinal fluid usually gives a low reading.
4. Treatment by malaria, while often producing marked clinical improvement in general paresis, seems, at least in the cases detailed, to have little effect on the colloidal gold reaction. There is, however, in the majority of the cases a distinct lowering of the numbers of sigma units.

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The Spatz Test for Iron in the Brain. (1) By J. S. DUDGEON, M.D., D.P.H.Belf., Assistant Medical Officer, County Mental Hospital, Whittingham.

CONSIDERABLE interest has been shown of late in the occurrence of iron in the brain and its relation to certain nervous diseases.

The existence of the iron can be demonstrated by placing a section of brain in concentrated ammonium hydrosulphide solution. After a few seconds the globus pallidus and the substantia nigra become a greenish-grey colour. Later, the red nucleus, the corpus dentatus cerebelli, the putamen and caudate nucleus also darken. Still later, the corpus mamillare, the anterior part of the thalamus and the cortex cerebri, especially in the deeper layers, also become greenish-grey. These centres always follow in the same order, and it is important to watch the process, as at the end of the reaction they have all darkened to more or less the same degree, and the contrast is lost. In diseases of the extra-pyramidal system this reaction may be of considerable interest, and Spatz (2) reports a case with pyramidal lesion in which there was an abundance of iron in the globus pallidus and substantia nigra; in the majority of such cases, however, he did not find any increase of iron. Gans (3) mentions a case showing marked extrapyramidal motor symptoms, in which he found an increase of iron in the globus pallidus, putamen and caudate nucleus.

In general paralysis the cortex of the brain, especially in the frontal region, in addition to showing the greenish-grey darkening mentioned above, shows a number of fine black streaks and dots which, though easily seen by the naked eye, are more fully appreciated when a hand lens is used.

These are due to the presence of iron in the adventitial spaces of the cortical blood-vessels, and they have been demonstrated in two diseases only, *i. e.* general paralysis and trypanosomiasis. (1) As the latter can be disregarded in this country, the test remains a convenient and rapid method for the pathological detection of

general paralysis in the *post-mortem* room. The best method is as follows : a slice of the frontal portion of the brain is placed in a glass dish and covered with ammonium hydrosulphide for fifteen minutes. The ammonium sulphide is gently washed off without disturbing the section, and the cortex is examined with a hand lens.

The test may be demonstrated microscopically as follows : a small piece of cortex is placed in formalin for three or four days, after which it is dehydrated and embedded in paraffin. Sections are cut and placed in ammonium hydrosulphide for about 12 hours. They are then washed in distilled water and put into a mixture of 1 *per cent.* hydrochloric acid and a freshly made solution of 20 *per cent.* ferrocyanide of potassium, in equal quantities. After washing they may be counterstained by alum-carmin.

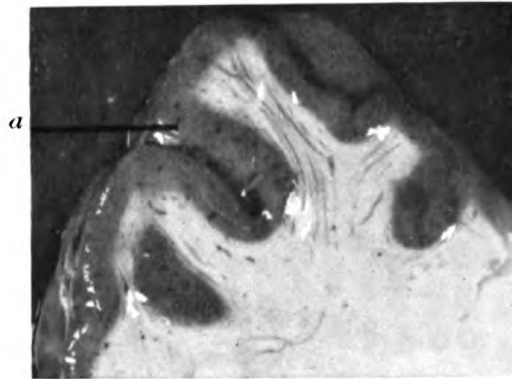
A section thus stained shows the iron as small blue granules in the wall of the vessel. Sections which have remained in formalin for long periods do not respond to the test.

I have obtained definitely positive results in twenty general paralytic brains, all of which showed the clinical signs of the disease during life, and I have not had a positive result in any other disease. Apart from the presence of iron in the vessel-walls the general paralytic brains reacted normally in regard to the order of succession of staining of the different centres.

I am indebted to Dr. R. M. Clark, Medical Superintendent, for permission to publish these results, and to Mr. A. H. Fann, Chief Laboratory Assistant, for the photographs.

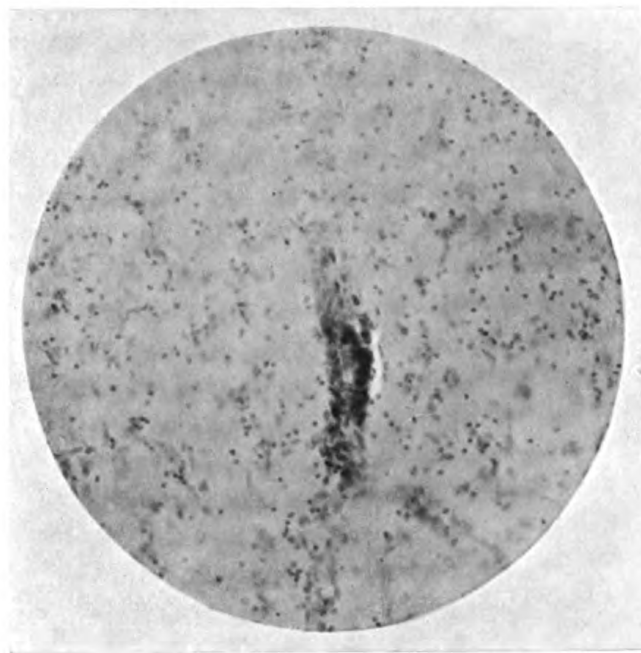
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Photograph by A. H. Fann.

FIG. 1.—Macroscopic section of frontal cortex of general paralytic brain treated for 15 minutes in ammonium hydrosulphide solution. The darkened cortex (*a*) shows the small black dots and streaks.



Photograph by A. H. Fann.

FIG. 2.—Microscopic section of cortex of general paralytic brain stained with ferrocyanide of potassium and hydrochloric acid, and counter-stained with alum-carmin. In the centre of the field a vessel is seen containing iron (stained blue) in its wall. $\times 300$.

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Twenty-eight Years' Lunacy Experience in Egypt (1895-1923).

By JOHN WARNOCK, C.M.G., M.D., B.Sc.Edin., Late Director of the Lunacy Division, Ministry of Interior, Egypt, and Director of Abbâsiya Hospital for the Insane, Cairo.

PART III.

PRESENT LUNACY PROCEDURE IN EGYPT.

THERE being no law on lunacy in Egypt, all procedure is by administrative orders. The Government has the right to take any steps necessary to secure public order. There is no Habeas Corpus Statute in Egypt. The Criminal Code prohibits illegal sequestration, but if the sequestration is done by the Government with a proper motive, it is apparently justifiable legally. The existing public hospitals for the insane belong to the Central Government; the local municipalities and commissions have none. In the local general hospitals, however, under the Public Health Ministry, there are special rooms constructed for the temporary accommodation of insane persons awaiting certification, or too ill to travel. The Lunacy Division of the Ministry of the Interior administers the hospitals for the insane and issues the necessary orders, which are, however, signed by the Minister; it also proposes the annual budget, and expends the sums granted according to the regulations of the Ministry of Finance. Grants for buildings are made to the Public Works Department, which plans the buildings on the instructions of the Lunacy Division, arranges the contracts, and supervises construction. The Division is almost as autonomous as a Government Department can be; and subject to the technical regulations of the various Ministries and the approval of the Minister, can decide its own questions. The legal Counsellor of the Ministry of the Interior advises it in legal questions, and defends it when attacked in Court. For the present the Director of the Division also acts as Director of the chief hospital at Abbâsiya, but the arrangement should be altered on the passage of a Lunacy Act.

Lunacy has been a separate department since 1914, and the change was not made until the impracticability of subordinating it to another technical department had been proved.

It is proposed before long to remove the Lunacy Division from the Ministry of the Interior and place it under the Public Health Ministry, as in England. There is no objection to the change, provided it is recognized to be a totally different subject to public health and ordinary hospital administration, and that circulars on public health matters cannot be applied to it, and that it continues to be as autonomous as heretofore.

Besides the two State Hospitals for the Insane, there are several

private *maisons de santé*, chiefly at Alexandria, on account of the cooler climate and the preponderance of Europeans there, but I have not seen one properly constructed for the use of the insane. They are merely villas with gardens often surrounded by other houses. There is no law to regulate their admissions, but I believe their owners exact a medical certificate of some kind. Personally I am against the recognition of private asylums in the East; but as the Government does not provide for all the better-class patients, private asylums are obviously the only alternative.⁽¹⁾

There being no law, there is no legal obligation to provide medical certificates before admission to the State Hospitals for the Insane. The Lunacy Division, however, insists on their being made on the forms issued by it, the order being signed by the local authority. These certificates are so seldom properly filled in that one cannot allow their defectiveness to entail the rejection of the patient, but after his admission the certificate is sent back to its drawer for completion (which in Egypt may take a long time). About one-fourth of the certificates are not dated; many are not even signed by either the doctors or the local authority. The facts stated by the doctor are sometimes self-contradictory. In the certificate the patient is often shown to be dangerous, while in the "statement of particulars," which in Egypt is filled in by the doctor, the patient is stated to be not dangerous. In fact if we only admitted patients whose papers were correct, our admission-rate would be considerably lowered. Many of the faulty certificates have a humorous side. I can recall at least three occasions when the doctor has certified that he "can find nothing wrong with the mental condition of the patient, and therefore he considers him a fit person to be detained in an asylum." At first sight one might think the doctor's conception of the hospital for the insane to be a refuge for the sane of Egypt. But the doctor probably meant that, although the relatives of the patient alleged his insanity, the doctor could find no corroboration of the allegation during his examination; he therefore passed the responsibility of examining the patient on to the expert at the hospital for the insane—a wrong procedure, as one should not admit an apparently sensible man into a hospital for the insane without previous certification. One hospital doctor misread a letter received about a patient, ordering transfer to "Zagazig," and mistook the destination to be "Magazeeb" (lunatics), and so certified the man as mad, though he was sane, and sent him to a hospital for the insane.

Another certificate read: "My reason for concluding that he is insane is that he says he loves the English."

On several occasions the doctor has apparently proved his own

insanity by sentences such as—"While the certifier was making this document, he jumped on the table, stripped himself, and struck the policeman."

However, more serious mistakes are, as I have already mentioned, the certification of the delirium of fever as insanity up to half a dozen cases annually, and the certification of moribund cases as physically fit for removal, in spite of repeated instructions to the contrary, and the omission to examine the patient physically, so that fractures are not noted before removal to hospital. Instances occur annually of doctors who, after satisfying themselves that the person is insane, do not believe he is dangerous, and therefore refuse to certify, and the patient is returned to his home, where he commits a crime, and is then sent to the hospital as a criminal. An investigation of these cases shows that there had been in most cases ample evidence of dangerous conduct given by the relatives, or that the delusions expressed by the lunatic were of a kind to show a likelihood of dangerous conduct; yet, because the patient was quiet while in custody, and did no dangerous act in the presence of the doctor, the latter pronounced him safe. This happens in spite of elaborate circulars explaining how doctors are to decide as to dangerousness.

Voluntary patients, if of Egyptian nationality, are admitted at the discretion of the director of the hospital, provided the patient himself signs a demand for admission.

Foreign subjects (including British) are only admitted if duly certified, on the order of their consuls; a special form in French is issued for foreigners. But in the case of British subjects (including Maltese, Indians, etc.), the formalities used in England for private patients are made necessary by an Order in Council, which prescribes that the procedure of the Lunacy Act of 1890 must be carried out for British subjects before internment in Egyptian hospitals for the insane. The consul acts as a judicial authority, and two English medical men grant the certificates. On admission, a notice of right of interview is served. The certificate that the interview would be prejudicial is never used there. The difficulties in getting the British admission papers properly executed before the patient arrives at the hospital caused considerable friction in past years. It was unpleasant to refuse the admission of British subjects arriving from a distant town in the custody of a Kavass, with no institution in Cairo to hold the patient pending completion of the defective certificates and order, and my action in insisting that the requirements of the law should be carried out was misunderstood. Protests to the British agent have resulted in the proper formalities being nowadays carried out.

Criminal lunacy.—The procedure in cases where the patient is accused of offences was gradually evolved. At first these cases were

treated as ordinary admissions, and criminals were discharged as freely as anyone else. After numerous consultations with the Government lawyers, an order was issued by the Attorney-General that, in cases sufficiently grave to justify summary arrest, whenever the question of insanity is raised by either side, the accused is to be sent to the hospital for the insane for observation and report, the dossier of the case to be sent to the director of the hospital.

Nearly always the suspicion of insanity is raised by the Government prosecutor (the Parquet), or by the Court; more rarely by the accused's lawyer.

There is no limit to the time the man may remain in hospital under observation. The report is sent to the Attorney-General, and if the report declares insanity and irresponsibility, and also that the person requires detention, the case is filed. The Attorney-General notifies the Public Security Department of the Ministry of the Interior, which makes an order of detention until further notice. Whenever, later on, the hospital director thinks the patient can be safely discharged, he so informs the Ministry of the Interior, which may order his discharge under certain conditions. In the case of murderers, who usually remain at least six years in hospital, the condition is that the patient should appear there every month, two months, or three months for re-examination; and if, at any re-examination, it is no longer considered advisable to leave the man at liberty, the Director has authority to detain him again, and the original order of detention still holds good.

In making orders of detention, the Ministry of the Interior classifies the cases as minor and grave. In minor cases the director of the hospital has authority to discharge, merely notifying the fact *afterwards* to the Ministry.

This probationary system works smoothly, with the exception that the relative who signs to be responsible for the patient and to bring him back for re-examination is usually a fellah whose intelligence is not equal to the position, and a good deal of trouble results from his want of punctuality and inability to understand the importance of the matter.

So far no criminal on leave has committed a fresh crime, and although relapses have occurred, the patient has been brought back in time. The Government pays the cost of transport at the periodical examinations.

The weak point about the present procedure as regards accused lunatics is that the accused is treated as a criminal lunatic, though in fact he has never been proved to be guilty of the crime; he is merely accused. In some cases where the evidence of guilt was slight I have had to point that out, and ask the Parquet to drop the charge

and let the case be treated as an ordinary patient ; but, of course, I can only guess in most cases as to the probability of guilt. I remember one case of an imbecile accused of murdering his father (also a lunatic) by hanging him, where the father had evidently committed suicide. Merely to report the accused as irresponsible would have entailed his detention in the hospital for at least six years. But, instead, I obtained the withdrawal of the case, and the patient, a harmless case, was discharged. Whenever a law is passed this procedure should be improved, and the " guilty but insane " verdict substituted. Juries do not exist in Egypt, and the question of insanity is decided by the alienist and not by the jury, as has long been the custom in Germany also.

Reports on accused lunatics are sent by letter to the Parquet, and very rarely is one called to appear in Court to be cross-examined on the report except in British Military Courts. I was sworn once and for all before the Egyptian Court, and that oath covered all subsequent reports.

The Criminal Code says little about the insane. Art. 57 merely says, " No person shall be liable to punishment for any act committed at a time when he had lost the power of appreciating the nature of his acts or of controlling them by reason of—

- (1) Insanity or mental infirmity.
- (2) Intoxication caused by intoxicants administered to him against his will or without his knowledge.

However, in cases of voluntary temporary hasheesh intoxication the person is held to be irresponsible, though not in the case of alcoholic intoxication ; the latter lasts a shorter time, but it is difficult to understand the difference in criminal responsibility.

During the past twenty-eight years about 1,500 accused lunatics, including 143 murderers, have been thus reported on, of whom about 1,200 were examined by me personally. The labour of reading (or rather listening to the reading of) all their dossiers in Arabic has been very great. Many of the dossiers were hundreds of foolscap pages in length, weighing several pounds. One dossier took eighteen hours to wade through. Indeed thousands of hours have been consumed in reading criminal dossiers.

The dossiers have to be read aloud in Arabic at a very rapid rate, while I note in English the important points, and so make a *précis* to be attached to the case-paper. Until I understood Arabic fairly well, this work was very tedious. A large proportion of the accused required long and repeated examination, and hundreds of hot afternoons have been spent in cross-examining these cases, and trying to elicit the real facts. Obstinate malingering is very common in Egypt, and involves much expenditure of time and trouble. After

years of experience it was often possible to predict the form of insanity before seeing the patient by merely reading the dossier. The characteristic delusions of sorcery and poisoning of the pellagrous, the repeated thefts by the general paralytic, etc., could not be mistaken. The duty of deciding later on as to the discharge of these cases was also formidable, and involved many examinations. The criminal asylum not only acts as the place of internment for criminal lunatics, but its chief discharges the duties of certifying their insanity and recommending their discharge. Extra remuneration to the extent of L.E. 180 a year is granted for reporting on accused lunatics. I may mention that on my arrival in Egypt I found such cases were examined by a medical commission of three outside doctors, who charged L.E. 25 each per case. The amount of the remuneration soon had to be changed, because, unless I had agreed to a low charge, only a few cases would have been examined; the rest would have had to be condemned without mental examination, as was the custom in the past; and it was a necessary reform to prevent all these lunatics from being condemned to prison unexamined. It has occurred, however, that the whole year's fees have in fact been well earned in one criminal *cause célèbre* that I have had to take part in.

Accused cases are prematurely discharged for want of room, and their readmission for a second offence is not rare. The value of life in the East not being high, a murder by a released criminal lunatic is not so severely criticized as it would be in England, but it is criticized even in Egypt.

Prisoners undergoing sentence whose conduct gives rise to the suspicion of insanity are sent uncertified to Abbâsiya Hospital for the Insane for observation, and certification if found to be insane. A large proportion of them proved to be malingerers who desired an easy life and better food. Their unmasking is not easy. Many prisoners suffer from a special prison psychosis—a sort of desperate reaction against their uncongenial surroundings and prison discipline, accompanied by acts of violence to others and to themselves. In a month or two such cases recover. This disorder is not malingering or hysteria, as the laity often believe. Some of the insane convicts are weakminded people who cannot earn a livelihood, and drift into crime, become habitual criminals, and are sent to prison, where they cannot endure discipline and are unmanageable. Their repeated, easily detected thefts, and their inability to keep out of prison are due to mental weakness; and it is useless to keep them in prison, troublesome as they are in hospitals for the insane.

Out of the 15,000 persons detained in Egyptian prisons, about 25 are admitted annually to Abbâsiya Hospital for examination, and the amount of L.E. 30 is paid annually for this branch of work.

Any individuals among the 102,000 *Government employees* (?) who suffer from mental disease, or are suspected to do so, were formerly interned in the hospital for the insane for observation before being invalided or certified to be insane—a very harsh proceeding, and one against the principle that a free man should not lose his liberty without previous proof of insanity or crime. After some years I succeeded in altering this custom, and now for many years such cases have been brought to my office for examination and report, and if necessary I visited them in their homes. About thirty such examinations are made annually, for which work the Government paid the fee of L.E. 22 a year.

Interdiction is pronounced by the Court called Maglis el Hassby for Mohammedans, and by the various Christian Patriarchs having jurisdiction over their adherents, also by the Consular Courts. Interdiction is pronounced for minority, extravagance, and mental incapacity. Many attempts have been made to reform the Maglis el Hassby, but its procedure appears still to require regulation; for once a patient's affairs are placed in the hands of an administrator, it is often impossible to enforce payment for maintenance in the hospital in the superior classes. Years of correspondence have little effect, or only result in the administrator being changed to a new man, who continues in his predecessor's path. 114 interdicted patients reside at Abbâsiya, of whom 63 are treated as paupers.

Frequent requests were made to me to give a certificate of insanity by persons who wish to interdict an insane relative. But the difficulty in learning the truth about the patient's conduct is very great, and it is impossible to either verify or disprove the allegations made in many cases. For many years I have refused to give such certificates, unless the Court appoints me to examine the patient and furnishes me with the dossier containing the allegations of both sides; for in Egypt it appears that in every interdiction one party of relatives applies for, and the other opposes interdiction. I never met a case where all the relatives were agreed, and refrained from making charges of interested motives against one another. However, there are many practitioners who give certificates in these cases, and there are strong reasons for controlling such certification by means of experts. Although the chief expert in Egypt on the subject, I was not called more than twice a year to certify for interdiction outside the hospital. Fees of from L.E. 2 upwards are payable outside the hospital; but if the case is in hospital, no fee is charged for a report for interdiction. Twenty to thirty such reports are furnished gratuitously annually.

The reverse of this certification is the case where certificates of sanity are requested by persons who wish to make trusts (*Wakfiya*)

to take effect after death. By Mohammedan law, if, at the time of making such a trust, the person was already suffering from his last illness, or was insane, the trust is rendered void. To prevent the validity of the trust being upset after death, it is sometimes advisable for the individual, if he is advanced in years, to get a certificate of sanity before signing. I have found it more difficult to certify sanity than insanity. Of course there is always an opposing relative, who, knowing he will not benefit by the trust, alleges all sorts of insane conduct on the part of the testator, and to separate the truth from the false is at times a puzzle. Often the patient is an old lady who understands very little about business, and of course, cannot read or write, and being in the Hareem knows scarcely anything of what goes on in the outside world, and one has to make the standard of intelligence low in these cases. Many of them were Abyssinian or Circassian slaves, now free, but retaining the *morale* of their former state, afraid to tell the truth, credulous and suspicious of strangers.

The examination for interdiction has many farcical elements. To begin with, frequently the patient is hidden away by the party opposing interdiction, and months may elapse before he is found. This happens quite frequently. Next, if his address be given and I call at the house with an agent of the Maglis el Hassby, the patient is often reported to have gone out that day—no doubt taken away by his relatives. Or the relatives refuse to admit us, and after trying persuasion in vain, we have to retire beaten. There seems to be no contempt of court procedure. Or some relatives deny the patient is there, while others assert he is hidden in the house, and we have to search for him.

When the patient is found, he is usually in a room with a lot of people including children, and only with patience and tact can the room be cleared of the majority of them and the doors closed; but at once all the doors are put on the latch, and eager ears listen, while the concealed relatives comment on our conversation and prompt the patient's answers, so we shut the doors again and start afresh. After perhaps long arguments we are able to get rid of the relatives and get on with the examination. Often the lawyers of each side are allowed to be present, and, of course, object to questions that may elicit information unfavourable to their parties. In these cases one has to find out whether the individual knows how much property he owns, what his income is, what near relatives he has, and how his money is being spent. It was amusing to notice how relatives try to teach all this information beforehand to a weakminded individual, who answers like a parrot but cannot explain in detail.

The Egyptians are a very litigious race, and must spend an extraordinary amount annually on legal cases. Even one's servants are

at law at frequent intervals. The Mohammedan divorce customs are the cause of much of the litigation ; and quarrels about land title are inevitable when neither side can read the deed he signs, so that fraud is continually being committed in land sales. As divorce is effected by merely repeating the phrase " I divorce you " three times, it happens very frequently. In the last census it is stated that 60 *per cent.* of all women between forty and fifty are divorcees, about 25 *per cent.* of those over 40, 10 *per cent.* of those between thirty and forty, and 5 *per cent.* of those between twenty and thirty. Of 140,356 divorced people living, 96,409 were women. About 11 per 1,000 of the population are divorced people who have not re-married ; of married divorcees, there are of course great numbers. [Compare 3½ per 1,000 in U.S.A., and 1 per 1,000 in Australia.] The number of divorces among the twelve million Mohammedan inhabitants of Egypt registered annually amounts to over 100,000, *i.e.*, 8½ divorces per 1,000 annually (³), or to 46 *per cent.* of the annual marriages (227,000). [In the U.S.A. in 1916 the divorce-rate was 1 per 1,000 of the population, and more than 10 *per cent.* of the number of marriages. The rate in England in 1920 was 0·08 per 1,000. In Australia in 1913 the rate was 0·13 divorces annually per 1,000.] This high divorce-rate in Egypt accounts for much litigation concerning alimony and restitution of dowry and family quarrels. The divorce customs of Egypt affect lunacy in many ways, *e.g.*, when a woman becomes insane she is often divorced at once. When a man has been interned as insane for a long time, the woman can get a divorce as being deserted—otherwise a Mohammedan woman has no right to divorce: it is a man's privilege. Therefore reports are called for as to whether a male patient is likely to recover and return to his wife. The distress, poverty, loss of children and home resulting from divorce are evidently frequent causes of insanity among women, as well as of prostitution. On discharge from the hospital the now divorced female patient has often to return to her parents if any exist.

It is to be noted that if a man repents of his perhaps hasty action in divorcing his wife, he cannot remarry her unless she first marries someone else, at any rate nominally, and is again divorced by her new husband. This procedure is, I believe, carried out for a small sum of money.

There are also civil cases regarding interdictions, and actions to cancel contracts on account of the alleged insanity of one of the contracting parties. Other actions were made against me for detaining patients, who are alleged by the applicants to be sane. Nearly every year I was served with writs of this kind, and the Government lawyers defended my actions in Court on the reports and evidence contained in the hospital records. These cases usually

refer to criminal lunatics, who may be at the time sane, but unsafe to be discharged so soon. No such action has succeeded; and, in fact, judges have held that, provided that the detention order has been properly made, the Government's action in detaining the case is covered by its administrative powers, and cannot be altered by any court. This decision does not prevent new actions being undertaken—in fact, there is usually some such case before the courts.

Litigious paranoiacs (*querulants*) are met with in Egypt, and some typical cases are under detention after committing acts of violence against judges and other authorities. They are just like the classical cases given in the text-books, and their claims against the Government amount to many millions.

Ordinary patients are certified by the medical officers of the Public Health Department, acting as police surgeons, hospital doctors, and doctors of districts. The younger of these officials have attended my lectures at Abbâsiya. In the case of accused persons, if the medical officer is asked by the Parquet for a report, he is instructed in serious cases merely to give his opinion as to whether or not the accused should be sent to the hospital for the insane for expert opinion.

The certificate form contains instructions as to time limits, etc., but complete instructions are given in circulars issued by the Public Health Department at my instance. In case of doubt a medical officer may send the case to a local hospital for observation, a special form being provided in that case.

Circulars from the Ministry of the Interior control the action of the police, who arrest and remove the insane to hospital, and contain instructions as to the necessity of female patients being accompanied by female relatives, as to the use of camisoles and the feeding of the patient *en route*, and the removal of dangerous weapons. The former custom of escorting the insane in the crowded tramcars or in open carts has been replaced by the use of special motor ambulances; the insane are no longer sent in company with prisoners. The patient's belongings are listed and entered on the back of the certificate form. Handcuffs are now prohibited. On the railways the insane are to be kept in separate compartments. Patients must not be sent naked to hospital. Infants must not be sent to hospital with their insane mothers.

Circulars to medical officers indicate how an opinion is to be formed as to dangerousness and unmanageability, including indecency; they point out the commonest mistakes made in certificates, such as entering hearsay evidence as having been personally observed, and quoting symptoms of physical disease as evidence of insanity, although a special paragraph is reserved for physical symptoms, etc. The removal of patients with fever, severe fractures, or moribund, is prohibited; also the certification of accused persons.

The idea that patients can be admitted to hospital without certification provided they pay for their maintenance is refuted. The necessity of sending foreigners to their Consuls for certification is impressed on medical officers.

Government employees requiring mental examination at the hospital for the insane are *not* to be certified beforehand, nor are prisoners requiring examination. Rules for the management of the insane in local hospitals were issued.

Ministerial Orders made on the proposition of the Lunacy Division prescribe the categories of patients to be sent to each hospital, and how they are to be sent. A decree fixes the charges to be made for treatment in the superior classes, and the procedure to discover the means of each patient, so that the Lunacy Division may invite the Maglis el Hassby to protect his interests.

Other orders regulate the transfers between the two hospitals, the notification of admissions, discharges, deaths and escapes, to the Lunacy Office, the procedure for the correction of certificates, the investigation of injuries, the keeping of registers of all cases admitted, and the removal of patients by relatives on discharge instead of by the police as was formerly the case. The detention in local hospitals of undoubtedly insane cases requiring treatment is prohibited. No demand for the expenses of transport or maintenance of a case is to be made unless authorized by the Lunacy Division.

Much of the above procedure is insisted upon for educative reasons, so that when a Lunacy Law is passed, the various authorities may already be in the habit of carrying out what will be rendered imperative by the law.

FORMS OF INSANITY IN EGYPT.

A comparison of Egyptian statistics with those of English mental hospitals shows important differences in the proportions admitted of the various forms of insanity. These differences are so great that they have changed Egyptian organization in some directions from the English system, and have left their marks on the buildings. Apart from pellagrous insanity, the comparative rarity of melancholia among Egyptians, though it is common enough among Europeans and Jews living in Egypt, is very striking. Seldom do we see a typical Egyptian case of melancholia with delusions of unworthiness. A few cases of frantic agitated melancholia occur among Egyptians; and cases of climacteric melancholia among Egyptian women are seen annually. But really suicidal tendencies are rare among the Egyptian insane; certain cases attempt suicide to annoy their guardians and get them into trouble. This rarity of

determined suicidal tendencies has modified hospital structures in this way—that the elaborate precautions taken in English mental hospitals are not necessary there. Iron grills on all the windows furnish an easy means of hanging; suicide by precipitation from trees would be easy to effect here, but I only once saw it tried, and on that occasion the patient was caught in time by using a fire-escape. The rarity of melancholia and suicidal tendencies seem to be racial rather than due

Forms of Insanity of Patients admitted in 1922.

	Abbāsiya.			Khanka.	Total.
	Males.	Females.	Total.	Males.	
Morphinomania . . .	—	1	1	} 51	78
Cocaine insanity . . .	2	3	5		
Hasheesh insanity . . .	3	—	3		
Alcoholic insanity . . .	17	1	18		
Pellagrous insanity . . .	36	47	83	103	186
Epileptic insanity . . .	5	7	12	20	32
General paralysis . . .	7	2	9	18	27
Imbecility, idiocy and congenital weak-mindedness . . .	21	13	34	30	64
Senile insanity . . .	5	17	22	—	22
Puerperal insanity . . .	—	9	9	—	9
Adolescent insanity . . .	19	45	64	141	205
Mania . . .	15	93	108	76	184
Traumatic insanity . . .	1	—	1	—	1
Melancholia . . .	8	39	47	27	74
Paranoia . . .	3	1	4	8	12
Chronic mania and dementia . .	13	14	27	40	67
Post-febrile insanity . . .	—	4	4	5	9
Organic dementia . . .	—	1	1	2	3
Confusional insanity . . .	6	—	6	17	23
Hysteria . . .	—	1	1	—	1
Stupor . . .	—	1	1	—	1
Total . . .	161	299	460	538	998

to religious causes, for the Christian Egyptians (the Copts) are seldom suicidal. The fatalistic belief of the East that no one can die until the day predestined for his decease may have some effect in this matter.

A sudden rage or outburst of bad temper explains some suicides. *E.g.*, an exalted patient once demanded his discharge from me; on my telling him that he must wait until we had observed his conduct a while longer, he rushed head-first against the wall, breaking his neck there and then. Some suicides by imbeciles appear to have been accidental; they only meant to pretend to hang themselves, but did the act too well. One criminal lunatic, having failed in an attempt to escape, forthwith hanged himself.

Self-mutilation appears to be more common there than in England : self-castration is often attempted, sometimes successfully ; two cases cut their noses off, one of them, a woman, declared she did it to improve her good looks. Swallowing foreign bodies, such as stones, etc., rarely with suicidal intent, is common ; and deaths have occurred from impaction and the subsequent operation. One patient was admitted after swallowing a table-spoon and at least one fork. As he had refrained from food for a long time and was emaciated, it was easy to palpate the cutlery in his stomach. Both were got rid of, and he was fed artificially for months, recovered, and was discharged, carrying his restored property with him. The table-spoon was regurgitated during artificial feeding, and a fork was passed per rectum. Swallowing stolen coins is not uncommon, and on several occasions we have been asked to collect the coins for the owners !

However, there is another tendency of the Egyptian insane which effectively counterbalances the relief one might expect from the rarity of suicidal tendencies, *viz.*, their frequent violence and homicidal tendencies. The number of assaults and attempts to kill other patients and attendants that occur is very great. Some attempts have succeeded in spite of elaborate precautions, owing usually to the carelessness of attendants, who failed to search patients carefully for weapons. Occasionally the patients supposed to be inoffensive have suddenly broken out and killed their neighbours ; *e.g.*, one anæmic pellagrin who was allowed to sit in a corridor by himself noticed the door of a single room open ; he slipped in and seized an imbecile lad and dashed his brains out against the wall. The frequency of homicidal violence among the certified insane is not surprising in view of the high murder-rate among sane Egyptians (about 1,000 a year), especially in Upper Egypt, where fatal fights on a large scale often occur. The intolerance and aggressiveness of the Arab, and his love of force rather than reason as an argument, are daily evident outside the hospitals, and inside them the same tendencies are seen uncontrolled.

The effect of the frequency of this aggressive tendency among the Egyptian insane on the hospital organization is seen in the solidity of the buildings and in the heaviness of the furniture, so that it cannot be used as weapons, also in the limitation of most of the occupations to work that does not require dangerous instruments, such as basket-making, house work, laundry, etc.

There is a cabinet full of dangerous weapons manufactured by homicidal patients at Abbâsiya—pieces of metal from tins, large nails, metal from bedsteads sharpened by rubbing on stones, batons of wood obtained by smashing doors or tearing up benches ; large stones excavated from the sand, or pulled out of the walls ; slings

made from clothing; ropes from the tapes of drawers; pieces of glass, etc., which show that many of the insane defeat the alertness of the attendants. I may note that on several occasions patients have stolen the attendants' keys, and so escaped at night. Other patients fashioned keys out of odd bits of metal and so escaped.

Being understood to be responsible for their detention, I have, of course, attracted the attentions of some of these dangerous characters. In the early days one received a good many attacks in the Hareem owing to the disorder in the one big section, one patient especially often breaking the rule laid down so explicitly in Deuteronomy as to fair play in a fight with the opposite sex. On one occasion a fanatical quarryman suddenly seized me around the waist and hugged like a bear until I feared for my ribs; I escaped with merely torn clothing. On another occasion an insane Pasha, whom I visited in his house in Cairo, seized me and tried to throw me out of the window; his servants ran for their lives and I had a lively five minutes holding on to the window-frame until help came. He had anti-European delusions, and had been "potting" Europeans from his window.

A paranoiac once quietly approached me from behind and knocked me down with a vigorous blow. Other attacks were made with brooms, stones in a sling, stones by hand, with fists and sticks. I was luckier than my subordinates, some of whom have been severely injured, indeed nearly killed more than once.

Exaltation (religious and social) is very frequent among the Egyptian insane. Toxic cases especially develop these ideas.

Hallucinations are rarer than among Europeans, and in hasheesh insanity are fleeting, and are often replaced by illusions.

Pellagrous insanity is very often seen in Egypt, and is one of the commonest forms of insanity admitted. It is a disease of the fellaheen, and seems to be almost unknown in the towns. It appears to have some very close relation with the use of maize as the chief article of diet; and countries where the peasants are restricted to the consumption of this cereal usually suffer from endemic pellagra (Italy, Roumania, Southern States of U.S.A., etc.). The number of theories as to the exact cause of pellagra shows how little is known on the subject, but during the war outbreaks of pellagra among Turkish prisoners and Armenian refugees in camps showed that maize is not a necessary factor in its production, a diet deficient in proteins appearing to be the important factor. The association of maize with pellagra may be explained by the low protein value of maize, some necessary amino-acids being absent from the zein of maize. The belief held in some parts of America that the disease is infectious is not borne out by experience in Egypt. Out of the many hundreds

of attendants who have lived among the insane there, I have never seen one develop pellagra, though some fellaheen attendants who came from the Provinces were found to have pellagra.

The clinical types of pellagrous insanity vary greatly, and just as the physical symptoms alter as the disease progresses, so do the mental symptoms. The blackened skin with erythematous patches, the dyspepsia, diarrhœa, anæmia and general debility with muscular atrophy are accompanied by mental symptoms which often may be described as an insane interpretation of actual painful sensations. The patient believes himself poisoned or put under sorcery, and tries to prove his belief by drawing attention to the diarrhœa "resulting from the poison," and to the weakness "due to the sorcery." The inflamed skin is proof to him that he has been set on fire; he declares he has a fire inside him and asks for water to quench it, and refuses to wear clothing. These beliefs result in appropriate actions, attempts to murder his persecutors, or acts of revenge against them or their children, and complaints to the police or Parquet about the persecution. He is always complaining and derives little satisfaction from his extra food; he wants more, or may believe it poisoned. He is at the same time miserable and confused, dull and unable to understand what is being done for him. He mistakes the treatment for torture, and he may kill his benefactors from that belief. He may develop organized ideas of persecution, believing that an enemy is inciting the other patients to murder him. Some cases become delirious, like a bad typhoid case, and die in a short time.

In later stages pellagrous patients are often found to present the type of chronic mania, aggressive and degraded in habits; many become demented. Some develop the exalted delusions characteristic of general paralysis, with exaggerated reflexes and facial tremors and impaired speech.

If not too advanced, most cases of pellagra improve mentally and physically in a few months on receiving a good diet; especially is it necessary to give them plenty of milk and fresh meat. They pick up flesh and become cheerful and rational and are discharged, to revert to their maize diet, and return with a relapse in a year to two. Even when apparently recovered there remains a certain mental change. They remain rather heavy and slow in manner; they do not spontaneously smile, and the *joie de vivre* is diminished. The advanced cases, who arrive shrivelled and blackened like mummies, or delirious, die in a short time; and the chronic cases, who have not mentally recovered, waste away slowly, develop dysentery and diarrhœa at intervals, and die in a few years. Pellagra is the chief cause of deaths in Egyptian hospitals for the insane (43 out of 188 deaths in 1922), producing three times the number of deaths caused

by general paralysis. Probably pellagra costs the country several millions a year in loss of labour and life. A crusade against it, as in America, is necessary when funds are available, and further field work has demonstrated its incidence. The anti-pellagrous crusade in Italy does not seem to have produced much result; and I doubt if anything less than a total prohibition of the use of maize as an article of human diet will have much effect. The difficulty of enforcing such a measure in a country where maize is the staple food would be immense, and would entail the cultivation of another cereal, preferably wheat, in its place, or the importation of cheap wheat in large quantities. I am persuaded that millions of one section of the Egyptian people—the fellaheen (4,000,000 men actually working in fields, with their wives and families, out of a total of 13,000,000 people, according to census)—are really being starved: although a sufficiently large diet is taken by them, its quality is so defective owing to its large maize content that it does not supply the nutritive elements required, and gradually the fellah in thousands of cases is attacked by pellagra and other diseases. The poorest class suffers most, for the more prosperous fellah supplies the deficiencies of maize by adding other more expensive articles of food. Thus the poorest class supplies thousands of insane and criminals. It is to be remembered that only a small percentage of the total pellagrous output ever reaches a hospital for the insane. Many cases are quiet, dull, weak persons who remain at home to die. In Italy it was calculated that 10 *per cent.* of the pellagrous are insane, and some thousands die of pellagra annually in Italy. In Egypt the total death-rate from pellagra must be very high, but in the villages the causes of death are seldom verified.

In view of the care taken in Egypt to control cotton-parasites of various kinds, some attention should be given to this disease, which ruins so many of the cotton cultivators.

After all, pellagra is undoubtedly a disease of poverty: without poverty there would be no pellagra. It is poverty that drives people to eat maize. Egypt is overcrowded with 13,000,000 people on a small area of 12,000 square miles. The density reaches the extraordinary figure of 1,083 persons per square mile. The population has rapidly increased under the protecting care of Great Britain; it was only 7,000,000 in 1882, and the cultivated area has not been proportionately increased since that date.

The struggle for existence of these extra millions must be very severe, and the least fit must fail in the struggle, and be destroyed by some disease, unless war equalizes the population to the productive powers of the country. Pellagra, bilharzia disease, ankylostomiasis and dysentery are all busy keeping the economic equilibrium from

being too much disturbed, and perhaps we should not blame them for the high death-rate, which is really the inevitable result of populating a country beyond its capacity. The advocates of birth-control would have a difficult task if they tried to convert the fellah to their views.

Hasheesh insanity is a form often met with in Egypt. Hasheesh smoking and drinking are common also in India, where hasheesh is sold under Government licence, while in Egypt it is prohibited since the time of Mohamed Aly, though extensively smuggled in from Greece, tons at a time—four tons were seized in 1919. In Indian asylums insanity from hasheesh did not appear to be common, when the Hasheesh Commission examined the question many years ago in India, few definite cases of hasheesh insanity being found in the asylums. Those interested in the subject may refer to the report of that Commission, and to the works on the subject in French, as hasheesh smoking was one of the vices of a certain literary set in Paris, and Baudelaire gave a full account of his sensations. More recently I have seen it stated that one-third of the insane cases certified in the Punjab are caused by hasheesh. The Indian hasheesh is derived from a different plant. Experiments by English observers vary much from those of Oriental devotees, the erotic illusions and feeling of happiness not being so marked in Englishmen. Monkeys subjected to its fumes developed a love for its use, and appeared to enjoy it, becoming fatter while using it. In Egypt it appears to be used for its euphoric and aphrodisiac effects. It is also said to increase the appetite for food. In spite of its prohibition, it is still used quite freely in various forms: besides being smoked, it is often eaten in sweets mixed with other drugs, *e.g.*, opium, or datura. The hashash becomes somewhat drunk and stupid, while enjoying his gorgeous dreams; but he at times becomes excited and aggressive, especially if interfered with. The alteration in the perception of time and of spatial relations is characteristic. Patients describe their experience as like watching a cinema for a hundred years. Objects also appear to be immense, and distorted into fantastic and often alarming shapes. All sorts of ecstatic visions are described—temporary paradises. It would appear that, unlike the morphia habit, that of hasheesh taking is easily thrown off, and I have noticed many patients give it up after one stay in hospital. There seemed to be no deprivation symptoms. Some hashasheen commence the habit as a remedy for depression in the onset of insanity, and the habit was more a symptom than a cause of the mental disease, as one has noticed in certain cases of insanity associated with the abuse of alcohol.

The number of cases of hasheesh insanity admitted to hospital is much less than was formerly reported to be the case; and as a cause

of insanity it does not seem to be of great importance in Egypt. Formerly it was alleged to be the cause as a matter of course in nearly all cases where no other cause appeared to be likely, and all sorts of well-known signs of chronic insanity were considered to be characteristic of hasheesh insanity, *e.g.*, talking aloud to oneself, foolish laughter, incoherent talk, etc. In India stress has been laid on three characteristic marks of hasheeshism :

- (1) Complete forgetfulness of what happened during the acute attack.
- (2) Erotic visions or dreams.
- (3) A peculiar hyperæmia or a brownish discoloration of the eyeball where it is exposed between the half-shut eyelids, *i.e.*, a reddish or brownish equatorial patch (Ewens' sign).

I have only found the second symptom to be of value in Egypt. Experience there showed the third symptom to be common in chronic lunatics who sit and beg in the dusty roads. The first symptom appears to be equally common in alcoholic and other deliria.

Hasheesh cases are usually violent, exalted and quarrelsome. They boast and defy authority. Nearly all deny using the drug, and on recovery profess surprise at being accused of the habit. Like other drug users, they are cunning liars and morally callous where the drug is concerned. Many have temporary delusions of an exalted kind, social or religious, and also persecutory ideas. They soon recover from their early attacks. Later on they become so morally degraded, lazy and reckless in behaviour that they are no longer responsible. The delusions may remain permanently. Hallucinations occur, and seem to be usually unpleasant, and quite different to the visions of the sane hashash.

Hasheesh is smuggled into hospital at times by patients' relatives or by employees. Hashasheen conceal the drug in their ears and also in less desirable parts, or hide it in the sand for future use. Hashasheen commit a good many crimes of violence and thefts, and many of them become vagrants.

A few cases of insanity are caused by the use of morphia or cocaine, but only a small percentage of the cases occurring in Egypt reach hospital. Of late years cocaine has become more used in Egypt, and cases of cocainism are now more frequently brought in.

Insanity due to alcohol has increased of late years; and a good many Egyptians break down from the abuse of alcohol. A total of 48 cases caused by alcohol were brought to Abbâsiya in 1920.

Epileptic insanity seems to be as common in Egypt as in England. 6,300 epileptic fits occurred in the two hospitals in 1920.

Adolescent insanity is quite common in Egypt and in the near East generally. The number of students and sons of well-to-do

Egyptians who suffer from this disorder is remarkable. I am convinced from examining the history of many cases that hereditary predisposition is the main factor in its production, although ill-usage, fright, over-study, disappointment and bad education may be exciting causes, without which the youth might not have succumbed.

What used to be called acute delirious mania, but which is more melancholic than maniacal in tone, occurs in Egypt, especially in the hot weather. After riots and street massacres we get a case or two of this type. The sudden shock and overpowering terror at seeing people shot dead in front of the individual sends him (or more often her) acutely insane within 48 hours. Nearly all die in a few weeks.

Post-febrile insanity is common in Egypt, where typhus and relapsing fever are rife; but only a fraction of the occurring cases need to be sent to a hospital for the insane. Hysteria is met with among Egyptian men, even soldiers. Puerperal insanity occurs among Egyptian women, but is more common among Europeans.

In a country where politics are of such absorbing interest, and cause such intense excitement, lunacy of course cannot escape from being coloured by them. A number of political cranks and rabid reformers, who wish to reform everyone but themselves, and who take their ideals from the exalted visions induced by hasheesh, are brought to hospital.

Much of the insanity in Egypt appears to be due to physical causes, poverty, semi-starvation and toxic agents. Malnutrition is a far more obvious factor in the production of insanity in Egypt than in England. The extreme prevalence of exhausting diseases such as pellagra, bilharzia disease, ankylostomiasis, and of many kinds of intestinal parasite, keeps millions of people in low health, and eventually a breakdown of the nervous system happens to many of them.

The literally universal eye-disease—out of 12,780,000 people, 155,000 are completely blind, *i.e.*, over 1 *per cent.*,⁽⁴⁾ and nearly 400,000 have only one eye, *i.e.*, over 3 *per cent.*—and the endemic vermin and parasites, external and internal, of the lower classes give some idea of the low hygienic state and low *morale* of the majority of the Egyptians. Yet with all these drawbacks, and with an inefficient dietary, and with only rags to cover many of them, the fellahin are usually a cheerful race, who think little about to-morrow, and accept their lot with resignation, enduring excessive heat in summer and cold in winter without a murmur.

The psychology of the sane Egyptian requires a few words. Being half Arab and half Egyptian, he has a mixture of the restless, excitable, violent character of the Arab and the plodding, stupid, apathetic nature of the fellah of the Delta, who from ancient times has lived as a serf, and has been conquered by all his neighbours.

The type varies in different parts of Egypt, as does the pronunciation of the language. The fellah of Upper Egypt with his harsh gutturals is a more excitable and violent person than his fellow-countrymen in the Delta. If annoyed, he easily gets into a rage and kills on small provocation. He works hard and lives hardly. Many of his class emigrate periodically to the Delta to find work.

Egyptians are excitable, and easily translate their feelings into actions. The fellah who forms the bulk of the population is conservative in ideas, obstinate, credulous and yet suspicious. He believes in sorcery, but does not like to admit the belief. He spends money in buying charms, which are often merely a text from the Koran on a scrap of paper. He is land-hungry and holds on to his bit of land tenaciously—Egypt is a land of small holders—he marries young and often, and has a large family with a high death-rate. Unable to read or write, he takes his beliefs from the local sheikhs. He is strict in religious observances, but his belief in his creed seems more important to him than carrying out its moral code. Of hygiene he shows more ignorance than even some of the lower animals, in spite of his religious ablutions. He lives in a mud hut without any windows, often near a stagnant pond of foul water which he uses for domestic purposes. He is stupid and slow in catching up ideas, and questions have to be repeated before he can grasp them. On many subjects it is useless to converse with him, his ideas and vocabulary being so limited.

The educated Egyptian usually acquires a veneer of European civilization, and can often talk fluently in French or English. He is polite in manners, sociable, hospitable, and apparently frank; but he is somewhat changeable in principles. Keen about money affairs and at bargains, he works best where there is a direct monetary interest. Work in itself does not usually interest him much. He is talkative, and given to express rather high-falutin' ideas. He has too little sense of responsibility towards inferiors and usually not enough sympathy for them. As a Government official he sometimes does not fully appreciate that he is a trustee and servant of the public. Fortunately there are many Egyptians whose integrity, sense of honour and conscientiousness compel our respect and esteem.

One saving grace of the Egyptian is that he has a great sense of humour; he is always ready for a joke and laughs readily. Indeed, he has the defect of that quality; he often seems to treat life as a joke, while we perhaps regard it too much as a tragedy.

TREATMENT OF THE INSANE IN EGYPT.

The insane are said to be well treated in the East as being specially blessed by God. I have met imbeciles of degraded habits so treated

by people who came to be blessed by them, and I have seen attendants who believed a certain patient to be divinely inspired. But the majority of the insane in the East have a poor time. In Tripoli they are driven out of the town and stoned, and in the villages in Egypt they are sometimes tormented until they turn on their enemies and rend them. The insane fellah is chased about by the village children ; he is often only able to live by stealing. If kept in his house he is sometimes tied up until his limbs are ulcerated. His friends poultice his head, cauterize his temples, vertex and back, and tie charms round his neck. Many of the insane, unable to understand the good intention behind their tortures, take revenge on being released, and many a murder has thus resulted. In one year I noticed seventy-six admissions suffering from cautery marks, usually done by a hot iron or nail. It is to be hoped that the removal of some thousands of the insane from the Provinces to the hospitals has reduced their sufferings to some extent.

The fact that the number of cases annually admitted suffering from serious injuries has diminished from nine in 1906 to four in 1922, is a hopeful sign, but the number of cauterized cases is still great.

I gave thirteen clinical lectures annually to the senior students of the Cairo Medical School and demonstrated how the insane can be managed by mild methods, and in time it is hoped that the Egyptian medical profession will pass on the message to the public. In these lectures the chief forms of insanity were described and illustrated by cases. Certification was explained, and the precautions necessary in the treatment of the insane in private houses were pointed out. The Egyptian insane are more humorous than the English, and it was difficult to keep the class serious when showing Egyptian cases. More than once the patient has insisted on continuing the lecture, indicating me as a patient suffering from criminal lunacy because I would not release him. The jolly demeanour of the general paralytic produces answering smiles, and his wild claims meet with peals of laughter from the students.

As to treatment in the Egyptian hospitals for the insane, an endeavour has been made to follow that usual in English mental hospitals, but *longo intervallo*, owing to local disabilities. However, the important principle of no mechanical restraint has been enforced since 1896. A few rare instances occurred up to 1917. Since then none has been used for any purpose whatever. In my opinion it is only justifiable when used as an extension of the restraint necessary in surgical cases, *e.g.*, while a sane man with a broken leg requires to have the leg restrained from movement by a splint ; if he is insane, the restraint may have to be extended to preventing his moving his

leg by means of his hands, for which purpose a camisole may be necessary for an excited case. Manual restraint in a cool climate might be used if trustworthy attendants are available. In Egypt manual restraint in such cases might end in disaster. The great objections to mechanical restraint are, that it exhausts the patients, and he so often considers it to be punishment.

It is claimed that this experiment in Egypt has proved to a large extent that the principle of non-restraint can be successfully applied to every race, even to the most violent criminal insane, and in hot climates as well as in cold, and I trust that the principle will soon extend beyond the few countries where it now obtains.

I am aware that my views on this subject are not shared universally in the East, for in a recently published manual of lunacy, it is stated that the strait waistcoat is an excellent means of restraint, especially in patients addicted to certain bad habits or to assaulting other patients. "It has, however, to be used with caution . . . and often reduces such patients to a condition of extreme exhaustion. Even in this latter class its application is often of great use, for the moral effect is marvellous, and gives one a means of stimulating efforts at self-control, also a last resource, where all efforts at persuasion have failed. . . . It should never be used as a punishment."

Seclusion was still used at Abbâsiya Hospital, especially for dangerous criminals, and for aggressive and indecent female patients, and for some of the non-criminal men who become a nuisance to their neighbours. The seclusion was often only partial, as the patient can talk through the grilled window. Much of the seclusion is voluntary, and much is in order to keep patients out of the sun in summer, and to prevent their exhausting themselves in frequent quarrels with their neighbours. Seclusion also prevents accidents among vindictive patients. On an average, less than two patients were secluded for eight hours every day in 1922 at Abbâsiya. Khanka Hospital, under Dr. Dudgeon's guidance, dispenses with seclusion altogether.

Padded rooms are unsuitable for the Egyptian climate, but a removable padded floor is in use at Abbâsiya for restless, delirious cases.

The use of hypnotics at night has greatly diminished to three doses per head per annum in 1922 at Abbâsiya, and almost none at Khanka.

Artificial feeding is used at Abbâsiya, and on an average five patients are fed thrice daily there. At Khanka this procedure is seldom found necessary.

The open-air life all day long in Egypt is very different from the indoor life necessitated in English mental hospitals for much of the

year by the cold climate here. Patients in Egypt remain out of doors all day except at meals or when ill in bed.

The occupations of patients are a good deal limited by the fact that all patients quiet enough to be trusted have to be discharged at once to make room. At Abbâsiya the accumulation of the worst cases during the past twenty-eight years, and the presence of so many criminal patients, prevents any but the simplest work from being undertaken. However, the patients do all the house work, help in the kitchens, stores and artisans' shops, work at tailoring, and do nearly all the laundry work; some make baskets and others help in gardening. At Khanka the patients also bake the bread; they also work on the farm and have much outdoor occupation.

While observing the varying methods of treatment, I have often felt the lack of any precise figures as to the existing practice in English mental hospitals, *e.g.*, regarding the amount of seclusion (not used at all in many English hospitals), the number of night draughts given, and the statistics of artificial feeding. If these details were given in the annual reports, they would be, in my opinion, of practical use.

The fixing of a proper diet for the insane in Egypt has caused a great deal of thought; luckily the presence in the Egyptian Government Service of an expert physiologist, Prof. W. H. Wilson, has made the problem easier. Although a diet, the analysis of which looked on paper satisfactory was given to the patients, various symptoms made one suspect that it was in some way inefficient. Occasional cases of scurvy and fresh cases of pellagra developing in the hospitals required explanation. Prof. Wilson's report in 1918 showed that probably a number of chronic pellagrins did not absorb the protein provided, or that much of the protein was destroyed instead of being absorbed. To make up for this defective absorption he recommended more protein, and suggested an addition to each diet of 50 grm. of milk and 45 grm. of meat. This was made in May, 1919, at Abbâsiya, and the death-rate there fell from 18·3 in 1918 to 9·7 in 1919, and 7 *per cent.* in 1920; 7·3 *per cent.* in 1921, and 6 *per cent.* in 1922. At Khanka only the meat was added in 1919, and the death-rate fell from 27·2 *per cent.* in 1918 to 16·2 in 1919, and 15·3 *per cent.* in 1920. On October 25, 1920, the milk was also added at Khanka, where the death-rate was 15·4 in 1921, and 9·75 in 1922.

Diet.—The ordinary diet consists of 200 grm. of vegetables, 50 grm. each of onions, fresh salad, rice, sugar, lentils, and of beans, 100 grm. of milk, 30 of flour, 560 of bread, 18 of salt, 20 of oil, 195 of beef, and 25 grm. of margarine. Before the use of green salad was introduced a good many cases of scurvy occurred. Prof. W. H. Wilson gives the following as the value in proximate principles of this diet:

Gross protein.	Available protein.	Biological value of protein.	Animal protein.	Fat.	Animal fat.	Carbo-hydrate.	Available calories.	Gross calories.
107'4	86	57'4	30'4	68'5	14'2	446'4	2,813	3,053

The causation of insanity being apparently so frequently physical in Egypt, its treatment will improve to some degree as the treatment of the physical diseases on which it depends improves. Important advances have been made, *e.g.*, in the treatment of ankylostomiasis and bilharzia disease. Indeed wonderful results from injecting tartar emetic in the latter disease are already being obtained on a large scale. I have no doubt that Dr. Christopherson's discovery of this treatment will save millions of lives, and an incalculable amount of suffering. One wonders how the State will reward him for this immensely valuable work.⁽⁵⁾ A glance at Dr. Dudgeon's report on Khanka Hospital for 1922 will show the terrible prevalence of bilharzia among both the sane and the insane in Egypt.

FUTURE DEVELOPMENTS.

From the foregoing account of the work, it will be apparent that much remains to be done by my successors before the treatment of the insane in Egypt can be brought up to the English standard. In certain respects it is ahead of some continental countries, *e.g.*, in the absence of mechanical restraint. I believe it to be in advance of any other country in the near East as regards the treatment of native patients. In legislative enactments it is far behind India.

The evolution of the treatment of the insane in a country advances by steps, and it is impossible with one leap to reform the system of treatment and bring it to the most advanced level. In the beginning, the insane have been throughout almost the whole world treated by mechanical restraint. That crude means of control finally disappears under humane considerations, and the second stage, that of control by seclusion with chemical restraint (*i.e.*, narcotics), takes its place. Later on, as attendants become better trained, seclusion is given up, and the insane are managed without seclusion by tact, and by well adapted structural arrangements, but with locked doors and often with the aid of chemical restraint. This is the third stage. A further stage is reached when doors are left unlocked, and the patient is allowed almost as much freedom as in an ordinary hospital. This stage is now reached in certain modern mental hospitals. In Egypt the first stage was passed in 1896; and treatment entered the second

stage—that of control by means of seclusion, modified by chemical restraint. At Abbâsiya, where the problem is complicated by the presence of hundreds of criminal lunatics, and the selected most dangerous insane of Egypt, it may be difficult to advance further towards a more liberal *régime*—at least until further funds are available.

But it might have been expected that in organizing the new hospital at Khanka a jump would have been made to the fourth stage. Consideration shows that our means and local conditions did not yet justify such an advance. With better-class (which implies better-paid) attendants and a more liberal budget, the fourth stage may be reached later on, at any rate as regards certain so-called “open” sections, but at that time it was felt to be unwise to attempt it. Khanka Hospital was therefore built with locked doors and fenced-in courts. It is, however, far in advance of Abbâsiya Hospital as regards absence of prison-like construction for the above-mentioned reasons.

Further developments should include an extension of the accommodation to such a degree that the number of beds can contain the annual admissions.

To determine the probable future admission-rate is somewhat difficult. Experience there shows that as the accommodation increases the admissions rise in number, as though a vacuum were created which draws in more and more cases, as has happened in other countries. The number of admissions of 1922, 1,073, will no doubt be exceeded before long. The census of Egypt gives the number of the insane existing in the country as 14,387, of whom 2,100 were in the hospitals for the insane, leaving 12,287 in the outside world. In the 1907 census the number given was 5,447. Even the higher figure of 1917 gives probably only a fraction of the real number of insane existing in the country. Why the census returns of 1917 should be so much higher than in 1907 is not clear. It certainly does not represent so great an increase in the incidence of lunacy.

Even if the hospital treatment of the insane in Egypt remains limited to that of only the dangerous and unmanageable, as at present, a moderate estimate of the annual number of admissions to hospital in the future might be 1,500. If the number of beds required is taken as four times that of the admissions, the total establishment required is seen to be 6,000 beds. In English mental hospitals the proportion of admissions to beds in 1922 was about 1 to 5 (23,026 admissions to 119,679 beds). The death-rate being now almost the same in the two countries, vacancies so caused will be about in equal proportions, but it will probably be long before it becomes necessary

to detain nearly all uncured cases in hospital in Egypt, as is done in England. Thus a freer discharge-rate might be held to justify the reduction of the proportion of admissions to beds to 1 to 4. There being now 1,841 beds provided, there remain 4,159 beds to be added. Experience will show how far this forecast is accurate long before it will be necessary to commence all the projected buildings, so that the figure can be modified according to the changing conditions. Of course only a portion of these extensive additions is required forthwith. Perhaps the addition of about 200 beds annually for twenty years would cope with the admission-rate; by that time I hope an equilibrium would be nearly reached between the admissions and the discharges and deaths. The readmission rate will fall when the present free discharge of uncured cases ceases—in 1922, 222 of the admissions were readmissions of old cases.

The chief requirements are as follows :

(1) A hospital near the town of Alexandria has long been wanted to accommodate the many cases arising there and in the neighbouring Mudirias, so as to relieve the excessive pressure at Abbâsiya and Khanka.

(2) An asylum for male criminal lunatics only is very desirable. The female criminal lunatics number only fifty-three, and for the present at least may be left in the ordinary sections.

The effect of the proposed Lunacy Law on the annual influx of these cases (130 in 1922) is problematical.

Possibly the male side at Abbâsiya will be eventually devoted solely to criminal lunatics and weak-minded prisoners, of whom many must exist in the various prisons for want of means of segregation. Already 475 of its 543 male beds are occupied by criminals.

Also the proposed Lunacy Law assumes the setting apart of a special asylum for criminals.

(3) A hospital for chronic, evidently incurable, fairly quiet insane idiots and imbeciles of the pauper class, who could be more cheaply managed thus than when kept in hospitals for the acutely insane.

(4) Proper separate provision for the European insane will be needed if the capitulations are abolished. It would be provided as part of item (1) above.

(5) Reception wards in various provincial towns.

(6) Central reception houses in Cairo and Alexandria, as foreshadowed in the Lunacy Law.

(7) Provincial hospitals for the insane at large centres like Tanta, Asyut, etc.

The suggested programme is as follows :

	Net addition of beds.
(1) At Khanka, two sections for fifty first- and second-class natives	50
(2) Convert whole of the male side at Abbâsiya to the use of male criminal lunatics	—
(3) Reception house at Alexandria for 45 patients	45
(4) Reception house at Cairo for 45 patients	45
(5) New hospital at Alexandria to hold 600 beds	600
(6) Khanka, add 400 beds, making total of 1,050	400
(7) Reception house at Tanta	45
(8) Reception house at Asyut	45
(9) Hospital for chronic insane turned out of acute hospitals	1,000
(10) Alexandria hospital extension to 1,000 beds	400
(11) Extend Khanka Hospital to 1,200 beds (?)	150
(12) Hospital at Tanta (?)	600
(13) Hospital at Asyut (?)	600
(14) Various additions for special purposes and small local reception wards, etc., say	179
Total	4,159
Existing accommodation	1,841
Total final accommodation	6,000

The above programme deals merely with the actual accommodation (beds) necessary, and no mention has been made of numerous necessary buildings required at the two existing hospitals, and at all the proposed new institutions.

No exact estimate is possible as to the eventual total cost of providing the 4,159 additional beds and the necessary buildings. Some idea may be obtained from the fact that the 1,841 beds already provided have so far cost L.E. 414,038, which sum, however, includes a small proportion of current repairs. The existing hospitals were, however, built when material was far cheaper than it is likely to be again, so that the cost per bed will probably be higher than L.E. 225 as heretofore. Perhaps about L.E. 391 per bed, as at Khanka, will be nearer the truth, in which case the expenditure necessary would be L.E. 1,626,000, or, if the programme is divided over a period of twenty years, an annual expenditure of L.E. 81,300. These figures do not cover the cost of sites and the provision of access by road or rail.

The reception houses at Alexandria and Cairo should each contain accommodation for about forty-five patients, and should be complete

hospitals with a resident staff, divided into admission, infirmary and acute sections, with four separate rooms for paying patients. Each might cost about L.E. 25,000.

The additional hospital at Alexandria should be situated on the coast towards Aboukir, and should hold 600 beds with separate annexes for 130 Europeans.⁽⁶⁾ The site should be convenient to road and rail, and be of at least 130 acres. The villa colony arrangement is recommended.

The cost of such a hospital might be L.E. 235,000.

These extensions, when completed, will rapidly raise the recovery-rate, which is the ultimate aim of all our efforts. At the same time further room for the paying classes will be provided; the pressure for room for them is now quite embarrassing, and I have spent a lot of time writing excuses for keeping people of social position with the paupers from want of room in the special villas. Better accommodation for the insane in the local hospitals will also have to be provided.

The transport of the insane should be undertaken by trained attendants of the hospital instead of by the police as at present.

The medical certification of insane interdicted cases for the Maglis el Hassby should be controlled by the lunacy authorities.

The institution of a pathological laboratory for the hospitals will be necessary.

The investigation of pellagra by field work, diet experiments and laboratory work awaits attention.

The attraction of a better class of attendants, especially of female attendants, and their better training may be found possible.

The Director of the Lunacy Division should have the status of a Director-General, and should no longer have to direct one of the Hospitals.

The Government Commission to revise salaries in the Egyptian Civil Service has recently decided that the salary of the post of Director of the Lunacy Division is to be reduced from the class L.E. 1,500–1,800 to the lower class of L.E. 1,100–1,300, so that he will no longer have the pay of a Director-General like the chiefs of the Prisons Department and of the Public Security Department—indeed, of most other Departments. In fact, the head of this division, which requires special professional as well as administrative capacity, is to be paid less than the heads of merely administrative sections, who have not spent much time and money in acquiring expert professional knowledge to fit them for their posts. This treatment of lunacy by the Government shows how little its importance is appreciated in Egypt. An even more glaringly inadequate salary is that fixed for Directors of Hospitals for the Insane, by which the Director of Abbâsiya Hospital of 1,500 patients, admitting more

patients annually than any mental hospital in the British Empire, and more criminals than Broadmoor, is to have a salary of L.E. 720-960, the same as that granted to a director of stores in another department.

The promulgation of a lunacy law is required to make permanent the present administrative procedure, which depends now merely on personal initiative and energy, and will alter as the *personnel* changes, and to limit the responsibilities of those in charge of the insane and so protect them from futile lawsuits. Even mechanical restraint is not yet made illegal in Egyptian Hospitals for the Insane; its disuse depends merely on the *personnel* in authority at the time.

PROPOSED LUNACY LAW.

The law as at present drafted will recognize State hospitals (civil and criminal), prospective State reception wards (central and local), and private licensed houses. All to be directed by medical men. The conditions of licences follow English precedents.

An Inspector-General of the Insane is to be chief of the lunacy administration, and also have the general powers of an English Commissioner in Lunacy. A board of visitors will visit every institution for the insane every six months, and the Inspector-General must furnish them with information as to any case.

Voluntary boarders are to be admitted on demand. All other private patients shall require an order of internment by a judge on petition accompanied by two medical certificates, under the conditions mentioned in English Lunacy Acts. A judge may order detention in a reception ward pending his decision, and he may call for further evidence. Proceedings to be secret, and petition to be valid for fourteen days only.

Patients may be admitted into reception wards on the demand of relatives supported by a medical certificate for ten days.

Local authorities are to bring dangerous and wandering insane before the Governor, who, if (1) the person is destitute, or (2) wanders at large, or (3) is cruelly treated, or (4) requires detention in his own interest or in that of the public, will cause him to be examined by a State medical officer. He can meanwhile detain the person for three days.

If the medical officer certifies insanity or suspects insanity, the Governor may order the patient's detention in a reception ward, if the Governor considers the case to fall into one of the four preceding categories. The Inspector-General can also order detention in a reception ward. Such detention may be prolonged beyond ten days by a judge under certain conditions up to a total of thirty days. This is to cover the cases of transient attacks, drug cases, etc.

The medical officer of a reception ward will notify the local judge of cases requiring internment in a hospital for the insane, and the judge will make an order of internment in his discretion, after personally interviewing the patient.

Medical certificates, time limits of orders and of medical certificates, and corrections follow English precedents; interested and related persons are prohibited from certifying. Orders justify internment up to a year, and continuing orders by the Inspector-General will be necessary every year on reports by the directors of hospitals.

The Inspector-General is given authority to inspect alleged lunatics in unlicensed premises, and to call for evidence, lay down rules for their periodical medical examination, etc., or may set them free. He may order transfers between institutions and permit absence on trial. Directors of hospitals are to discharge all patients they consider recovered, excepting criminals. The Inspector-General may order the discharge of any case in a hospital or licensed house or in single care. The petitioner has power to order discharge unless the Director certifies dangerousness, and the Inspector-General confirms such certificate.

Applications to courts to compel release must have the previous permission of the Attorney-General.

Escape and recapture are dealt with as in England.

Criminal lunatics.—Judges have power to order the removal to a reception ward or to a hospital for the insane for mental examination any accused person whenever lunacy is alleged. His dossier is to accompany the accused. The period of observation is not to exceed one month unless the Inspector-General permits its extension up to six months. If the director of the hospital reports the accused to be insane and irresponsible, the court may make an order of internment, or ask for further evidence; the order is not to be made unless the evidence of guilt is satisfactory to the court.

Insane convicts whose sentences expire may be further interned as criminal lunatics by a judge's order.

The Inspector-General can only discharge criminal lunatics with the consent of the Ministry of Justice.

General.—Detention in licensed houses for payment is illegal except on an order of internment as above.

Temporary clauses arrange for using existing hospitals for the insane as reception wards, until separate reception wards are built.

Penalties are prescribed for aiding escapes, impeding the access of the Inspector-General to alleged insane persons, refusing to produce alleged insane persons, keeping them for profit without licence, refusing to obey an order of discharge, for all detentions contrary to

the provisions of the law, for fraudulent statements or certificates, for ill-treatment of the insane by the person in charge, for the unauthorized introduction of intoxicants, hasheesh, opium or alcohol into institutions for the insane. The Inspector-General of the Insane, being the head of the Lunacy Administration, has the general power of issuing rules for the institutions in his charge. Therefore the minute directions of the English Lunacy Act are not embodied in this law. The Inspector-General will select the registers and forms suitable, and issue them for use; they are in fact already in use, having been issued under this general power; nevertheless, I think that mechanical restraint should be definitely prohibited by law, except under stringent conditions. It is more necessary to make this prohibition in Egypt than in England.

PERSONAL.

Private practice in lunacy.—There was some private practice offered on my arrival in Egypt. But in a short time it was apparent that all my time and energy would be required by the hospital work. However, when supposed to have an afternoon free for recreative purposes, I occasionally saw a few cases, and up to 1914 an average of L.E. 100 a year was earned in private fees. The majority of cases seen were treated gratuitously. During the war this work ceased except in urgent cases brought to my house, and in 1919 it was given up altogether, as my reduced energies were fully occupied by Government work. Medical consultations in Cairo are often peculiar. A number of medical men speaking different languages meet in the room of a patient. In this polyglot meeting it often requires tact to get near the patient, let alone examine him. French is preferably the medium of communication, but spoken in different accents by Germans, Austrians, Italians, Egyptians and English it is not easy to understand. After some experience of these meetings I kept clear of them as far as possible.

Hours of work.—The necessity of having to work on all seven days a week, without any Government holidays, Christian or Moslem, for twenty-five years, except one's annual leave, which was often used as sick-leave for recuperation from the exhaustion of previous over-work, left little time for recreation and social relaxation. But in 1920 I was enabled to depute some branches of my hospital work to an Assistant Director, and at last enjoyed a weekly holiday like the rest of the staff. Physical disabilities indeed rendered it necessary to pass some of the ward work on to a deputy. An attempt to blind me that might have succeeded, made by a criminal lunatic in 1920, decided me to make the change. At the same time I reduced my

office hours from 7 to 6 per day. Besides office work I had been present on the Hospital premises for an average of 23 hours out of the 24 daily, ready for emergencies, telephones, visitors, messages, etc. No week-end or Sunday holidays could ever be taken.

Until 1914 my office hours were on an average $7\frac{1}{2}$ per day, *i.e.*, from 9 to 1.30 p.m. and from 3 to 6 p.m. all the year round; these hours do not sound very long to English ears, but in the months of November, December and January much longer hours were worked, up to 310 office hours per month (equal to $12\frac{1}{2}$ hours daily for six days per week), while in the summer afternoon hours were curtailed.

Emoluments.—It may interest you to hear how lunacy specialists are paid abroad. I commenced in 1895 with a salary of L.E. 600, a partly furnished house, a food ration covering half of my messing requirements, two house servants, lighting, laundry and fuel. By 1904 the salary had risen to L.E. 1,000, and fees for criminals *expertises* were paid by the Ministry of Justice to the amount of about L.E. 200 annually. Since 1908 as lecturer on clinical psychiatry I was paid L.E. 50 a year. In 1911 I added the unpaid post of Director of the Lunacy Section to my work; but I had in fact already acted as such for years, planning the new Hospital and pushing its construction on, and advising the Government on all Lunacy questions. In 1914 I discharged the duties of Director of the Lunacy Division of the Interior as well as those of Director of the chief Hospital, but I only drew the emoluments of the latter post. In 1915, after eleven years' salary at L.E. 1,000, my pay was raised to L.E. 1,200, pensionable; fees for examining criminals and employees and travelling expenses were fixed at L.E. 250 a year. In 1917 the pensionable salary was raised to L.E. 1,300, and in 1919 to L.E. 1,500; and when later on a permanent 20 *per cent.* rise was given to all civil servants, it rose to L.E. 1,800.

The pension legally due after my twenty-eight years' toil amounted to L.E. 840.⁽⁷⁾ Of course the extra period amounting to over four years, worked on Fridays and Government holidays, does not count for pension. In England the pension on the same salary and emoluments, with the same length of service, would probably be considerably higher, with possibly an addition for special service. The pension being so small, I, like other Anglo-Egyptian civil servants, had to remain at my post, even when I could no longer work at high pressure, simply to earn a better pension. It is bad both for the Government and for the official that this should be necessary. British officials in the East should only hold office in their prime, when they have ample energy, optimism and good health. Young blood is needed to face the trials of an enervating climate and Oriental fatalism. Twenty-one years of service should be enough, and should secure an

adequate pension of at least L.E. 1,000 a year, as in India. Fortunately the Egyptian Government eventually awarded me the maximum pension of L.E. 960 (nearly £1,000) in view of special services. In 1917 the medical profession in Egypt had the unusual experience of seeing *two* of its members in the Government service decorated with the C.M.G. in one year, I after twenty-two years', and a *confrère* after eleven years' service, receiving that honour. The Egyptian Government has recently shown its appreciation of my work by awarding me the 2nd Class Order of the Nile.

Conclusion.—For forty years the British have laboured in Egypt, and they have reformed the administration of the country to a considerable extent, Lunacy Reform being one of the smallest items in the programme; but the Egyptians apparently remain morally unaltered; and, be it remembered, it was their moral failure, producing of course material and administrative failure as a consequence, that brought in European intervention, and finally British occupation. The same *morale* that prevailed in Egypt up to 1882 remains unchanged. Meanwhile the population has increased from 7,000,000 to 13,000,000.

The past twenty-eight years have seen an attempt to apply British methods to the management of the insane in Egypt. The same attempt is now commencing in Palestine, where I suppose the same path will have to be trodden; but luckily the small population there will limit the problem.

Lunacy work in Egypt has repeated the experience of our predecessors in that country, the ancient Israelites, who had to make bricks without straw. The lack of permanence and finality in nearly everything, the rapid relapse of a reformed abuse if not watched, the great personal responsibility where no law or appeal exist and the consequent gravity of a single mistake, and the amount of routine work due to the inefficiency of the subordinate officials, have often rendered the life almost a slavery. There being such little expert assistance, one has had to work at high pressure, always in a hurry. What will happen to the insane in Egypt when independence is completely carried out—nearly all English officials can be removed legally by April, 1927—is a matter for speculation. It is difficult to suggest any safeguards for the rights of this category of minorities.

Before closing I must mention gratefully my obligation for unfailing encouragement and support to my life's partner, without whose help I would have long ago given up the task.

(¹) Some years ago the State of Victoria, Australia, passed a law prohibiting private asylums; but the relatives of well-to-do insane refused to put their patients in State asylums, and removed them to other countries. The law was soon repealed. —(²) Not far from 2 *per cent.* of the total male population. This is surpassed by Switzerland, 1½ *per cent.* of total population (male and female) being Government

servants.—⁽³⁾ I have estimated the number of married Moslems alive in Egypt in 1920 to have amounted to 4,823,000. The ratio of divorces to married persons thus becomes 20·7 per 1,000 per annum, or more than one in every 50 married persons was divorced during the year, or one out of every 25 marriages became dissolved during the year; at which rate, if no other factors were at work, all Mohammedans would be divorced people in 25 years' time!—⁽⁴⁾ The proportion in another hot and dusty country, Australia, is 7 blind persons per 10,000 of the population.—⁽⁵⁾ More valuable indeed than the political services for which so many beer and whisky makers have received peerages!—⁽⁶⁾ The present European population of Egypt being 181,500, the number of beds allowed would be about 7 per 10,000. In England 25 per 10,000 are provided.—⁽⁷⁾ To obtain which I have contributed 6 *per cent.* of my salary, *i.e.*, an average of L.E. 60 per annum.

Clinical Notes and Cases.

Two Cases illustrating the Conception of Moral Imbecility. By
IAN D. SUTTIE, M.B., F.R.F.P.Glas.

CASE 1.—R— is of working-class parentage. His father is said to have taken alcohol, but there is no evidence of excess. He is one of the younger ones in a family of fourteen, of whom three died young, and three in adult life. The remaining members of the family are all married or working, and have no psychopathic history. R— himself was not very robust, but was intelligent and ambitious; he had a good school record, but had to leave at 14 to earn his living. After a short service as a shopboy, he became a *colporteur*, and later—probably by the assistance of friends—he managed to put in a certain amount of training at a University, studying for the ministry. He was appointed a collector and organizer for Church charities (?); this brought him into touch with the “good and the great,” and in a short time he obtained an appointment as a sort of lay assistant missionary.

Prior to this time we have no record of wrong-doing. He now, however, attempted to combine the pursuit of material interests with the Church work he professed and was paid for. He retailed tea as a sort of side-line, though, having no shop, he seems to have relied at first upon personal interviews with the members of the congregation to do business. He soon became more enterprising and carried on trade by post. He recognized the necessity for advertisement, and also showed his intelligence by circulating a leaflet and by issuing numbered coupons with his wares. In connection with these there was a regular “drawing”—money prizes—and the names of winners were advertised. There is no evidence that he did not run this lottery fairly (even though it was illegal), but one might conjecture that the distribution of prizes was such as to increase business. Then came rumours about the condition of a lady in the neighbourhood, and the Church, fearing worse scandal, decided to dispense with his services. He was told that he was a whole-time employee, and was expected to be this or resign. R— was loth to lose the prestige of his semi-ecclesiastical status, and determined not to give up the prospects held out

by his growing tea business. He met the difficulty in a bold and adroit manner, which showed at once his originality and ability to influence others. He seceded from the Church and set up a congregation of his own. I am convinced that the pleasure of preaching and the dignity of "being a minister" were quite as dear to him as the "credit" it gave him in his business transactions.

Things seem to have been going to his satisfaction when his wife (the lady referred to above) had a baby untimely. R— bolted and disappeared. Whether this panic was due to a correct estimate of public opinion in a Scottish parish or to a wholly unfounded and unreasonable dread of *material* punishment, I cannot say. I should not feel inclined to credit the man with the grace to be ashamed of anything, while I *know* that he has *now* a very shrewd understanding of the limitations of the law. Whatever the cause of his flight he recovered his confidence almost immediately, and reappeared with a plan of campaign. He issued the circular, appended at the end of this article, to all his congregation.

Note first the supposed "medical certificate." If I dared to publish it *in extenso*, its spuriousness would be obvious to every medical man. It purported to be signed by a highly respected local physician, who would have had a fit if he could have seen the "qualifications" appended to his name. Note also the clause about bringing the circular to serve as a ticket of admission. By this ruse he recovered *all but three* of these compromising documents. Indeed the wonder is that any remain extant if it involved their possessors' absence from the meeting. Here again, if he does not show a real appreciation for the feelings and ideals of others, at least he has a practical acquaintance with some aspects of human nature, and the ability to turn this to account. At any rate he actually managed to preserve a following.

He next appears as the champion of the oppressed in the law courts, and by his acuteness and energy wins a large inheritance for two of his "adherents." These old ladies, from gratitude (though other reasons are also hinted at), take R— and his wife to live with them. R— is now a capitalist and does business as a money-lender; he also begins to drink, and is known to be sexually immoral. His wife divorces him. He marries again and has children, but treats his second wife very badly. Friends rally round, however, and a very eminent person is interested. R— once more gets into the thick of religious and humanitarian movements, and even seems to have been worthy of his hire.

Whatever the reason, R— was now promoted so rapidly from one job to another that he had not time to show his incompetence or to make any place too hot to hold him—until he got to the very top of his particular tree. There his way of enjoying the fruits, and of carrying out the duties of his office, led to his summary dismissal in nine months. The job was one requiring not only intelligence and organizing power, ability to influence others and some knowledge of the world—. R— had these—it required also diligence and a sincere interest in the work, a personality which would stand the scrutiny of really intelligent men, and above all,

an understanding of the real functions and mechanism of social life. In these he was grossly defective.

Eight months after dismissal he is known to have obtained drink and money on false pretences, and to have evaded payment of an hotel debt. Almost immediately after this he got in touch with a well-to-do man, to whom he represented himself as a high official in the Ministry of Munitions. He professed a great interest in the career of this gentleman's son and posed as able and willing to procure him good employment (this was a "lay" he had worked before). Later, being as he said short of ready cash, he borrowed twenty-five pounds without giving a receipt.

Three days afterwards he called again on this gentleman and borrowed another fifty pounds on the strength of the same "patter." This time, however, R— appears to have felt that some formalities were necessary, so he wrote out a cheque on a piece of paper. This cheque was drawn on Cox's Bank, London, and R— drew the recipient's attention to the magic letters M/M (Ministry of Munitions) after his signature. In recognition of his obligation in the matter of the loan, and in token of his interest in the lender's son, R— drew the cheque for a hundred pounds, the extra twenty-five pounds being a "present" for the young man. Whether R— felt that he had been too generous in this or whether he blamed himself for neglecting golden opportunities, he was back again at his victim the next day. This time he swapped cheques for twenty-five pounds. R— cashed what he held at once before his own "London" cheques could be collected, and when in due course the latter were dishonoured ("drawer not identified"), and the man whom he owed a hundred pounds came round to see him about it, R— met him in the friendliest manner. He certainly managed to reassure his victim as to his *bonâ fides*, and to turn the conversation to the young man's prospects. R— made definite offers, but required in turn certain signed particulars. In this way he got his man to sign across two stamps on a blank sheet of paper; the details, as R— said, could be filled in when he had more time.

So far as this story has gone, the intellectual defect, if any, seems to have been on the side of the honest population. R— now, however, seems to have overlooked the possibility that his victim's trustfulness and tolerance might not last after his own soothing glamour had been withdrawn. Perhaps he relied on the stamped receipt; in any case he took no precautions to cover his tracks, and merely moved into the next parish before settling down to drink his plunder. There he was arrested almost immediately in an extremely alcoholic condition with fifty pounds still on him.

A few days after arrest he smashed up his cell and was then lodged in a lunatic asylum because of his acute excitement, not because any suspicion of a permanent abnormality had been aroused. Even two months later on appearing before Court he is recorded to have behaved in an insane fashion. His condition was said to have been one of mania or delirium tremens or general paralysis, and Dr. Watson, now of the Board of Control, who saw

him shortly afterwards, reports that he was depressed and hallucinated, grandiose, offering cheques for two hundred and fifty pounds, and saying that he would be alive at the end of a thousand years. He was terrified of the hangman, of a wild beast at his heart about to suck his blood, and was restless and emotional. This quickly cleared up, however, and he became his normal self. There can be no doubt that alcohol played an important part in this psychotic episode, though it lasted far too long to be diagnosed as delirium tremens. Quite possibly arrest and imprisonment may have had something to do with this acute confusional condition.

As an inmate of the C.L.D. (Criminal Lunatic Department) detained during H.M.P. (His Majesty's pleasure) he quickly and accurately grasped the situation, and, while making the best of it for the sake of present comfort, at once began to shape the most comprehensive plans to get out, and once again to get into "a position of trust and responsibility, not overworked, but with adequate remuneration." He "had buried the past," and it "shamed and grieved" him so much that he "could never again refer to it." Having "repented on his knees and made his peace with Christ," he did not see why his fellow mortals should be less forgiving. In order that he should understand the public point of view and not acquire an anti-social grudge, I pointed out that his detention here was not retributive for the past, but precautionary for the future—in fact that the public had a practical interest in the matter and could not afford to forgive too lightly.

His religiosity disgusted most people, who thought him a canting hypocrite. Though it was impossible for his intimates to doubt the spurious nature of his piety, yet for my own part I am convinced that he did experience, and intensely enjoy, the religious emotions. The sentimental good nature, the expansive feelings of benevolence, the generous and lofty intentions that most people experience only in special circumstances or under the influence of alcohol, this man could evoke, one might almost say, at will. Not merely a deliberate, fraudulent *mimicry* of the *expression* of emotion, but the thing itself was at his call. He really took pleasure in sentimentalizing and in pious talk; it cost him no effort to keep it up; it was not a pose of which he tired or out of which he could be surprised. He was a real actor, not a simulator, and it was this that caused a difference of opinion about his character. He was, however, a phenomenal liar, knew very well the advantage of religious and moral pretensions, and had no scruple about deliberately turning them to account. The sincerity I attribute to him amounts merely to this—a sincere hope for a happy life after death, a genuine pleasure in emotional religious exercises, and perhaps a real interest in the speculative metaphysics called Theology. He also (and this is important) appeared to value his status as a professed christian because of the company with which it identified him; it was a sort of class pride, much as "being a sportsman," or "being a gentleman" is—it gave him a sense of dignity. He did not, however, act as if it laid him under any obligation.

Not but that he was prepared to lay his piety aside temporarily

now and then in order to be "all things to all men." My own receptive attitude towards him, neither critical nor commendatory, puzzled him. He could not quite place my detached interest. At times I could see he suspected me of being a worldling, perhaps even a scoffer, although in point of fact no other competent observer really credited him with as much sincerity as I did. He showed a broadminded desire to adapt himself to whatever might be my attitude in these matters, and from time to time he experimented in the rôle of "man of the world." Finding that even this could not "draw" me—did not produce any favourable or unfavourable response from which he could learn my "personal" attitude—he gave it up. These manœuvres, however, compelled him ever afterwards to discuss his ambitions, etc., more frankly with me. Whether he felt that, not having been "choked off" to begin with, he might safely show an interest in his own material prospects, or whether he felt the necessity of maintaining, for the sake of consistency, the broad-minded and practical attitude he had once adopted, at any rate he never again camouflaged himself quite so completely behind moralizations. Not that he gave up the endeavour to size me up, but he never again risked allowing me to think him inconsistent or hypocritical.

The intelligence here displayed might be stigmatized as cunning so as to imply that the case shows a defect in the cognitive function, and is not a true example of "moral imbecility." To my mind this would be to use a word of uncertain meaning—cunning—to convey a false impression. Cunning is no other than intelligence used in the pursuit of narrow, shortsighted or unworthy purposes, or directed against fellow citizens; just as wisdom means intelligence with good sense, breadth of outlook and socially commendable. A man with sufficient cunning cannot be claimed as intellectually defective. In my opinion this man showed no intellectual defect which could account for his moral lapses. On the contrary there is evidence that his ability to think and to express his thought has steadily improved *during his adult life*, in spite of alcoholism. He now writes an excellent letter, not merely well-expressed, but well-arranged, so that his topics are dealt with systematically. He neglects no conceivable source of help in his present predicament. He humbles and reconciles himself to his relations, makes interest with half a dozen philanthropic and evangelical agencies, moulds his conduct so as to secure the favour of the prison authorities, at the same time corresponding with his lawyer with a view to compounding with the complainant so as to have the charge withdrawn. To a lawyer this last scheme might appear stupid, but it must be remembered that R— has had no experience of criminal law. Also as he is untried (insane in bar of trial), it is quite natural for him to imagine that restitution and the appeasing of the plaintiff will at least weaken the prosecution—in point of fact it would tend to have this effect in a jury trial. Again, when I pointed out to him the futility of this course as a legal procedure, he at once grasped the situation and concentrated all his efforts on other plans. Churches, Freemasons, Salvation Army, Prisoners' Aid Societies

and other social and charitable agencies, and various influential people with whom he had come into contact, were all canvassed and considered with a view to their possible usefulness in securing liberation and employment for himself.

When finally he knew that he was to be liberated, his active mind at once attacked the new situation. None of his material interests were overlooked, from a spare collar-stud upwards. Teeth were put in order, eyeglasses were obtained, D.P.A.S. was laid under contribution for collars, handkerchiefs, etc., and his friends and relations were touched for small presents in kind or specie. New toothbrush and powder, spare elastic bandage—his outfit, though meagre, was considered as carefully and systematically as if he were going to the South Pole. He could say with perfect justice that he had no prospect of being able to replace it; that he could not afford to neglect any chances. At the same time I think a normal man who was being liberated ostensibly and professedly that he might morally rehabilitate himself, would have been a little shy of showing quite such enthusiasm and loving care over his kit.

This typical indifference to the *impression* his conduct might make upon others will be referred to again. Before liberation he freely questioned the motives of the Society that was going to take over the responsibility of looking after him. He suspected them of the intention of exploiting him, and he tried very hard to arrange fixed terms with a definite period of probation. As the Society agreed to accept the responsibility as guardians and employers only at his earnest and importunate entreaties, he not only shows himself unreasonable, but again betrays his disregard for, or incapacity to appreciate, the niceties of social feeling—what is sometimes called “common decency.” No sooner were the arrangements made for conditional liberation than he was inquiring and scheming about the removal of all conditions. The influential friends he could get at, the societies whose good offices he could enlist for employment, etc.—the old game of intrigue was on foot again. Even after he was out he was “touching” his friends for money, etc., writing the Prison Commissioners and the Medical Superintendent, complaining of the condition of his kit, etc., and trying to fasten upon them the responsibility for the loss of his baggage, which had gone amissing during his drunken spree prior to arrest. Every effort had been made to recover this, and he had professed himself satisfied that no more could be done. Apparently he actually reckoned that his letter to the Commissioners would procure him sympathy, and perhaps a little cash or a lightening of conditions. Yet it contained several demonstrable mis-statements into which he must have supposed no inquiry would be made. Another typical act was to “raise the wind” by “writing up” his prison experiences. This has not been admitted by him nor by the editor, but it is morally certain that R—was the correspondent.

And all this time his real, rational objective is unconditional liberation. He knows it, and knows, too, that it depends upon the

judgment of men who are observing these actions. He neglects no pains to secure their favourable opinion of him—his overt actions and particularly his professions are laboriously saintly. Yet he spoils the whole effect through failure to appreciate the importance of so-called "intuitive" or "sympathetic" judgments of character. He takes the same trouble to present a uniform attitude towards things before me, though there is some difficulty in synthetizing a broad-minded and practical "man of the world" point of view with extreme and even extravagant piety. Still, such characters do exist, blameless themselves, yet tolerant and even humorous. His conscious pose is consistent, not merely as a habit, but by deliberate intention. Yet he cannot see the inconsistency of his solicitude for all the trifles of his personal comfort. Perhaps no one but a psychologist could *perceive* it, but any normal man would *feel* it. Though there is no *logical* inconsistency, and though there is nothing wrong in his attention to personal interests, yet it is out of the part that he has set himself to play. Everywhere R— shows himself utterly lacking in *tact*; he has a certain knowledge of human nature which he can turn to account in dealing with his fellows, but the natural, unstudied facility for getting on or remaining in harmony with them he has not. He is like a man laboriously speaking a foreign tongue; all the idioms, the nuances of meaning escape him, and he is in consequence quite unconvincing. His adaptation to social life is an *intellectual* one; for him his fellow beings are *objects* whose reactions have to be laboriously calculated, and who require to be controlled by constant watchfulness and dexterity. Where he is inattentive, excited, or out of his depths psychologically, his defect—his inability to deal *naturally* with his fellows—becomes obvious.

It is no wonder that at times he shows the most startling clumsiness in his social relations, a disregard for, or ignorance of, the consequences of behaviour which is not legally forbidden, but is prevented by custom. Unconscious tradition intuitively recognizes many details of conduct and expression too subtle for the ordinary person to distinguish cognitively. Besides unwritten laws there are unspoken conventions and manners which are learned without ever being put into words. These R— has *not* learned, and his emotional relation to his fellows is now such that he cannot learn them. This *is* his defect, and certainly it is not dependent upon any inability to think logically, or to understand and use highly abstract conceptions. He cannot "put himself in another's place," and this is an operation which requires not so much high intelligence as sympathetic imagination, in which R— is totally lacking. In consequence he cannot "see himself as others see him," and has no feeling for the delicacies and niceties of social intercourse. I do not refer to class mannerisms. Actually his manners are superior, while the lower classes whose experience of the raw facts of life induces in them a corresponding bluntness of speech, are in no way characterized by the insensitiveness I have tried to describe. R— has the intelligence not to be obtrusive in his piety to the extent of annoying others, but he has not the flair

to avoid disgusting some by his ostentation. He has no sense of shame, and once, when detected by my predecessor in a petty breach of trust, he lied magnificently; finding this useless, he waited some days and then apologized—for the breach of trust!

With this goes naturally an utter lack of self-consciousness, and it is largely to this I fancy that he owes his power of convincing others. Those who would not be deceived by his plausible stories or dazzled by his affected learning and semi-genuine piety might well be taken in by his assurance. It is noteworthy that R—'s mental condition came in question only because of an alcoholic psychosis; defect was never suspected.

If we take it that his abnormality consists primarily and essentially in a defective social *rappor*t, the question of origin arises—whether it is germinal or acquired, whether it is due to physical or psychical agents. This question can only be answered after full consideration of the nature of this *rappor*t from all possible points of view.

All that can be inferred from this case is that a man of average, or more than average, intelligence and power of attention, who earnestly and consistently applies his abilities to the task of making an impression on his fellows, may fail in his purpose because he is affectively out of harmony with them. While he has a measure of success with strangers and inferiors, he is utterly unconvincing to intimates and equals, who have no hesitation in calling him an arrant humbug. I submit that the curious obtuseness displayed by this man cannot be accounted as the ignorance and stupidity of the congenital defective. It is not facts, relations or logical consequences that he overlooked, but merely the feelings and point of view of others; their insight (even where intellectually subnormal) into human motive, and their intuitive appreciation of sincerity and consistency. The suggestion is that R— is defective in organic sympathy, or the power of identifying himself with others and seeing himself and seeing things with their eyes. Again, I do not think that we explain the case by calling him a hypocrite—apart altogether from the fact that hypocrisy on this scale itself bespeaks an abnormality of the social *rappor*t. R—'s pose is certainly largely assumed, and he spares no care nor effort to make it convincing; but he spoils his effects repeatedly, blindly, gratuitously, in a way that a person of ordinary social sensibility would not do. An accomplished hypocrite like Mr. Pecksniff habitually exploits subtleties of expression to which R—, equally intelligent, is totally blind. R—'s defect, though certainly not defined by the data here given, does show with significant conspicuousness in his social reactions.

Besides what is here recorded, R— is known to have been twice convicted of fraud and false pretences, to have had two dramatic "conversions" of a type more familiar in American camp revival meetings than here, to have had several illegitimate children, to have practically deserted his second wife, though in a position to support her, to have importuned the wife who divorced him for money, though she was then married to another man, to have set

up a trade in "druggists' sundries" on the proceeds, and to have sold cures which he manufactured in his back kitchen.

CASE 2.—N— was a youngest son. He was brought up by his grandparents, and, by his own admission, was thoroughly spoiled, though religious observances were scrupulously insisted on. He was neither "wild" nor specially studious, but appears to have been a normal youngster, very keen on boating and fishing. He had an average education, but left school (against his parents' wishes) at the age of fourteen, "to see the world and earn some money." There is no evidence of early delinquency, his companions were respectable, his grandparents were affectionate and supplied his wants generously. He learned to express himself well, to "know right from wrong," and could have had a trade or a training if he had had the patience to wait for it.

He seems to have avoided sex difficulties, to have got through adolescence contentedly enough with a minimum of information. Even now he is "refined," in no way hyper-erotic, and though not prudish, he never formed the habit of obscene speech. There is quite probably an element of self-righteousness in his contempt for his former Borstal companions, but his remarks about their inability either to think or talk about other than sex matters and without garnishing their language are quite just, and far too moderate to be mere cant. His attitude is not so much one of disgust and horror as of amused contempt. He regards obscenity as a stupidity.

This healthy, energetic, well-brought-up youngster gets homesick within the year at his first job on leaving school. When his employer refuses him leave and arrears of wages, M— deserts, stealing his employer's bicycle "to get home on," and caps the matter by selling the bicycle. Although he is only fifteen he gets ten days' imprisonment. Thereafter he worked for six months, then idled at home for five months, and then went to work again. Almost immediately he injured his hand, and consequently was out of work for a week. He did not get the compensation he wanted, and could not meet his lodgings bill. As he puts it now, "so as not to defraud her (his landlady) and get jailed anyhow," he stole five pounds from a workmate. He actually used one pound to pay his debt and banked the rest, which was recovered and returned to its owner.

His action in this situation is really very extraordinary. He could have got the money by writing home for it; there is no evidence that his landlady suspected his *bonâ fides* or dunned or threatened him in any way; his inability to pay was clearly accidental and temporary, while the probabilities of detection of the theft appear to have been very high indeed. Altogether this was a very abnormal reaction, and was met by sixty days' imprisonment.

After three months' work and three months at home, he took a situation at which he was hard-worked, but which allowed him a certain amount of rabbit shooting, which he keenly enjoyed. He was now nearly seventeen when a middle-aged woman seduced him. This *liaison* was in no way of his seeking, and he broke it off immediately in disgust and disillusionment. (The facts of the affair

are fairly well ascertained, and the details of his story are of a character and consistence that make falsehood very improbable.)

M—, now gets "fed up" with his situation, breaks his engagement, though by so doing he forfeits his wages, and joins the army. He appears to have been in a very bad temper, and to have had a strong grudge at something, for he threw his civilian kit into the sea. This kit consisted of two good suits, and was for him quite valuable property; his present-day explanations of this act (which were only obtained under cross-examination) are obviously rationalizations; he "had no use for them," "no place to keep them," "never thought of sending them home," and "did not like to sell them."

It must be noticed that in view of the charge subsequently brought against him this action will bear a more sinister interpretation. He may have been getting rid of clothing that might help to identify him. But the police never knew or inquired about this jettison, and there was no reason for him to tell me about it if it was meant to conceal guilt. It was told in a context and with the expression of grievance—bitterness against his employer because M— had lost his wages and was dissatisfied anyway. Judging from his manner and expressions, etc., I formed a fairly confident opinion that this was a primitive reaction to a sense of injury. This self-hurting reaction is common in people of low culture, Celts particularly, and children, and of course it greatly reinforces the pleasing sense of injury.

M— now joined the army, and seems to have got along very well for a few months. A scandal, however, came to light in regard to a weak-minded girl, and M— was arrested on suspicion. He did not communicate with his people, had no agent, did not apply for bail, but the prosecuting authorities satisfied themselves that he was innocent of the charge. I was not allowed to see the precognitions, but am satisfied from his account and from other circumstances that this is true. He had, however, been in prison nearly three months and was discharged without a trial, and these circumstances and the nature of the charge "turned all his folks against him." With his accumulated pay, however, he easily found less particular companions in town, got drunk and had a serious accident. After recovery he still found his situation intolerable, and after trying for a transfer he left the army.

In his next place M— met a girl whose people were respectable and fairly well-to-do. He became very intimate with her, and it was practically arranged that they were to get married, when his story came out. (He says the local police told the father, and there is no reason to doubt this.) The girl did not change her mind, and he is still quite confident that she was willing to elope with him as he intended before her parents could make any effective opposition. He had at that time twenty pounds, but reckoned that all that would be needed for honeymoon expenses. At any rate, though he needed a rig-out he resolved not to trench upon capital, and got what he wanted "on tick." To procure this he found it necessary to give his employer's name, and did so, though he had

no authority for this. He now appears to have had an excellent opportunity to achieve his purpose, and celebrated his success by a drink, and another one, etc. In a week's time he found himself without money, without a job, and consequently without means to get married or to repay his debt and conceal his illegal use of his employer's name, or even to escape. Three months' imprisonment followed. The abnormality of this reaction consists in that the clothes were not really necessary, that he could have got them by writing home, that there was no desperate hurry, that he did not carry out his own plan.

On release he fell in with a widow (middle-aged and with a family) whom he had known formerly. He lived with her for a week, and entertained her copiously with liquor obtained by forging orders in the name of a former employer against whom he had a grudge. He then cleared out and went to meet his sweetheart, whose attachment seems to have been undiminished. She gave him two pounds and asked him if he was going to go straight. She found a photograph of the lady he had just left holding one of her children. Her jealousy was quieted by M— explaining that this was a picture of his mother and himself when a child. To lull her suspicions he resumed relations with her and managed to persuade her he had come straight from prison. It was no time, however, till the liquor fraud was discovered and traced to him, and he got five months' imprisonment. His first letter from prison was to his sweetheart, asking her to wait for him, and when she did not (or was not allowed to) reply, he was bitterly aggrieved. He could understand that she must have discovered his untruthfulness and infidelity, but this did not diminish his resentment. His mind turned at once to the other lady, the widow, whose good-nature he praised; she certainly did not neglect him in his adversity. He remarked of her, "I could love that woman as my mother."

Almost immediately after his release M— got into trouble again, and he is now—at the age of twenty—in prison for the sixth time ("fraud and false pretences," six months). He is of medium height, stoutly built, healthy and good-looking, without any physical abnormality whatever. Unaffected and refined in speech, he expresses himself well, his manners are good, he has a quiet dignified bearing with no trace of self-consciousness or self-assertiveness. Pleasant to talk to, sometimes witty and even humorous, he never becomes "loud" or tries to make an impression. He neither truckles to authority nor becomes familiar, nor fastens his anti-social grudge upon his custodians. He has all the Celtic gentleness and charm of manner, and generally speaking he has the "presence" of a man of culture.

M—'s intelligence is not defective, and this is confirmed by two other observers to whom I specially referred the matter. His information is just what could have been expected from his history and circumstances; he perfectly appreciates his position and prospects. His ethical *knowledge and judgment* are fully up to the average. There is no emotional dulling; his interests are fairly wide and lively. As regards his feelings for others, he is in no way callous,

though not excessively sociable. He keenly regrets the loss of his "pals" in his regiment, and apparently got on very well in this society. He has a strong attachment to his grandfather, who is now a cripple, and to whom he used to read. In general he shows a strong craving for affection, and would, to judge from letters and remarks, be demonstrative. In his affections, however, like an infant, he takes all and gives nothing. Apart altogether from his reckless, impulsive lawlessness, his utter disregard for public opinion and the will and well-being of the community, he shows himself extraordinarily unjust and ungenerous to his intimates. He is apt to find a grievance and prone to cling to it—I mean beyond even what is commonly found in Celts and children. He speaks warmly and gratefully of any kindness shown to him, yet paradoxically has no sense of obligation. That is to say he has social emotions, but no organized sentiments which can influence conduct and persist through change of mood. Yet his plan to elope with his girl (when his story had "got out") was not really a triumph of self-interest over regard for others. When was he ever regardful of his own interests, and why, if this was the dominant motive, did it not achieve its object? Certainly M— himself now puts the worst construction on his intentions: "If I had once got married to her they could have done nothing"—"they" being the parents-in-law, meddling policemen, and a hostile environment generally, who would, had things gone according to plan, have been satisfactorily bested. To my mind he does not well fill the part of ruthless fortune-hunter.

Undoubtedly, however, he did treat his girl very badly, but the point is that it was for no corresponding gain to himself. Angry at not getting any reply to his letter, he now grumbles that she did not give him much chance to pull himself together "after only two simple charges." "She was my ruination." I suggest that she has learned all about his faithlessness and how ruthlessly he has treated her. He says, "I am not one of those sorrowful, pitying kind. I am sorry for no one, and no one is sorry for me." Again I say he has nothing to reproach her with; all the wrong-doing is on his side; he has been a thoroughly "bad hat" to her. He answers, "She has been to me—wasting a stamp and a letter." Again I suggest that after his last arrest she had found him out. He says, "When I have forgiven her (for having a child), could she not have forgiven me?" and apparently fails to appreciate the significance of the fact that her *liaison* came before her acquaintance with M—, while his philandering had been continuous up till now. He admits also casting up her previous lapse to her whenever he was drunk or angry.

If these responses and his explanations of his acts of dishonesty truly represent his mentality; if his motives are not more social than this would indicate, more consistent with each other and with his own interests; even if we consider that he is unable to give, *truly or falsely*, a more plausible consistent *account* of his desires and intentions, we must consider him an imbecile. Taken seriously, his autobiography would indicate in his character a naïve ruthless

selfishness which unfits him for social life, and which is yet so unintelligent that he does not form purposes, foresee difficulties, or shape his conduct with any consistence towards an end. It would be easy to diagnose in him gross *intellectual* and moral defect on the strength of his own admissions, and to infer that social censure is not apprehended by him, and merely provokes in him sulkiness, defiance and malice, and that consequently segregation is the only way of dealing with this case.

M—'s ridiculously unjust reproaches against his *fiancée* are not, however, stated by him as fixed opinions. In making them he does not express the assurance that comes from a sincere sense of injury (real or delusional). There is no vehemence of anger, but rather a sulky, bitter grumble which, though directed against her, is apparently inspired by a resentment at things in general. It is very difficult and tedious to record observations of the shades of emotional expression. The impression conveyed by tone, manner, etc., suggested a very complex feeling reaction: a masochistic, self-pitying satisfaction in the irretrievable breach with his girl, and the ruin of his own prospects; an attitude of sour grapes; an assertion of his independence and self-sufficiency as if to say, "I don't care what she does, and I let her see it"—all these and other compatible interpretations of his story are suggested by his demeanour in recounting it.

Though he is never coarse nor loud nor really boastful, I am satisfied that he has not presented his conduct in an unduly favourable light, but rather the reverse. Milton is not unique in idealizing Lucifer, and the situation where the hero misunderstands, and violently upbraids the heroine, has a very strong and wide-spread fantasy appeal. This sado-masochistic attitude and the splendid isolation ideal are consistent with each other and with his childish nature and Celtic temperament. They probably played a considerable part in his bad conduct, and certainly contribute to his present attitude, for it is certain that he is dwelling on his wrongdoing in the spirit of an Ishmael; and that to some extent his account of his motives and intentions and the blame he throws upon the girl is rather a reflex of his present *mood* than a true index to his character, intelligence and understanding of right and wrong. At most times he recognizes enthusiastically her kindness and generosity, her loyalty and unsuspectingness, and admits the recklessness and stupidity of his own actions.

Though quite frank and of rather an introspective habit of mind, this boy has really very little insight into his own motives. He is quite unable to supply any explanation for his erratic conduct. I will not presume to decide how far this may indicate a definitely pathological (unconscious) motive as responsible for his offences, or how far the unformed, volatile nature of his mind makes it impossible for him to remember and describe his experiences. Certainly this character—the absence of fixed interests, purposes, sentiments, etc.—must also have the effect of rendering him particularly subject to the influence of any sudden impulse.

I am adducing this case merely to show how gross disorder in

social reactions can occur in the absence of rational motive, intellectual defect or other definite psychopathy and even in a person affectionate and otherwise well-disposed, even where none of the reputed causes of crime are present, psychopathic inheritance, delinquent companionship, poverty and slum life, parental neglect and alcoholism, vice, ill-health, idleness or gambling—even in the absence of all these traumata, development need not run on social lines. This at least is certain—that in this case affection for others and pleasure in their society has never developed into a sense of reciprocal obligation, nor has intelligence and self-interest been able to supply its place. I suggest the conclusion that it is possible for the development of the social *rapport* to be arrested at certain levels.

I have to thank Mr. Wallace, of the Scottish Central Association, for supplying particulars in this case.

Appendix to Case 1: R—'s manifesto to his congregation.

MY DEAR BRETHREN,—Doubtless you will be aware of the present very serious illness of Mrs. R—. It is only my duty to my Church and work which compels me to write this letter.

Mrs. R— gave birth to a premature child last thursday. The child is dead and was buried a few days later, in the presence of Mr. ———.

On account of the illness of my wife I was forced to deny myself the pleasure of attending our Saturday night and Sabbath services, and this is the first opportunity I have had of referring to above matter. I am eager to meet you all and state what I cannot here write. In a word I desire to thank all who have extended to us on this trying occasion their sympathy and assistance.

I am led to understand that others have misunderstood misjudged and said hard, cruel, and unchristlike things about the illness of Mrs. R—. With whom I have the utmost sympathy for, for had they the true facts of the case before them, their opinion, I venture to say, would change. I make no comment, but invite the earnest, wise and prayerful consideration of the following certificate from Mrs. R—'s Medical Adviser:

I certify that Mrs. R— was delivered of a premature child on the 27th inst., the child is small and feeble and doubtful whether it will live. Mrs. R—, while standing upon a chair cleaning or reaching for something, fell to the floor, which I believe was the cause of bringing on premature labour.

Later.

From the appearance of the child when born, although it lived three days, nothing can be brought against Mr. R—'s moral or Christian character in connection with the affair.

(Signed) X. Z.,
Physician and Surgeon.'

This matter will be dealt with fully on Thursday night first at 8 p.m. in above Church and you are specially invited to be present.

On entering, kindly hand this letter over to the person in charge at the door, it acts as your ticket of admission to meeting.

I purpose at this meeting, giving once and for all an authoritative statement regarding this matter. It is expected that addresses will also be given by the Rev. Y. Y., Mr. X. X., Mr. Q. Q., Registrar of Births and Deaths, etc.

Mr. X. X. will preach on Sabbath forenoon and I propose delivering a special sermon on Sabbath evening first, when I do trust all shall be in their usual places at both diets of worship. It is easier to face the cannon's mouth than to expose oneself to the slings and arrows of a scandal-loving and uncomprehending public, therefore I ask all the Lord's People and friends on this occasion, to assist me with their prayers.

Yours sincerely in Christ's service,

(Signed) R—,
Minister in Christ's service.

A Case of Melancholia accompanied by Urethral Stricture with Retention of Urine. By LOUIS MINSKI, M.B., B.S., Assistant Medical Officer, Bootham Park Mental Hospital, York.

The patient, A. B—, male, æt. 58, was admitted as a voluntary boarder to Bootham Park Mental Hospital on November 10, 1923. Patient had had two previous attacks of melancholia, one in 1910, when he was ill for a few months, the other in 1915, lasting about four years, and from each illness he made an excellent recovery after treatment in mental hospitals.

There was evidence of mental disease in the family, his mother having died of senile insanity; otherwise the family history was unimportant. Patient's natural disposition was not conducive to the maintenance of robust health. He was sensitive and highly strung, retiring, self-depreciative, moody and dull, and he led a very solitary life.

History of illness.—Patient made a good recovery from his last attack, and remained well for some years until about three months ago, when he began to feel ill physically. He became very worried over his health, and especially because he was suffering from severe frequency of micturition at nights, and this caused insomnia. Becoming rather depressed he decided to place himself under care. On admission to hospital patient was very depressed and apprehensive. His expression was dull, listless and anxious. He did not express any actual delusions, but was morbidly anxious about his health. Physically he looked pale and anæmic. His heart and lungs were normal.

Alimentary system: Tongue furred and breath foul-smelling. Bowels irregular. Examination of the rectum and abdomen revealed nothing abnormal.

Genito-urinary system: Complained of having to get up frequently during the night to pass urine, but could only pass a few drops. He also complained of pain in the rectum and penis on micturition.

Urine: Acid, specific gravity 1030, small deposit of pus, heavy deposit of phosphates. No sugar, blood or albumen.

Progress of the case.—Patient was ordered rest in bed in the open air and given light diet. Aperients in the form of cascara and calomel were given to empty the rectum and colon, and then a course of high Plombière lavage. This treatment was continued until November 20, 1923, when it was noticed that the patient's abdomen had suddenly become distended, and on examination it was found to be hard and tympanitic. No definite "lump" could be felt, nor was peristalsis visible. Rectal examination revealed nothing abnormal. Patient looked drawn and anxious; he was complaining of slight pain in the abdomen, his pulse was rapid, temperature subnormal and tongue dirty. Hot fomentations were applied to the abdomen, sips of water given and 5 c.c. pituitrin injected hypodermically. A large tube was passed *per rectum*, but was obstructed about 8 in. from the anus.

Patient spent a restless night and the abdominal distension increased. He was now passing mucus *per rectum*, and was suffering from incessant hiccough. Pituitrin was repeated. Surgical advice was sought. A diagnosis of acute intestinal obstruction was made, and immediate laparotomy advised. On opening the abdomen the intestines were found to be greatly dilated, and, in places, congested, but no organic obstruction was detected. The bladder was greatly distended, but it was impossible to pass a catheter into the bladder, and, as urethral dilatation failed, a suprapubic cystotomy was performed.

Patient stood the operation well, and for a few days sips of water were given by the mouth while rectal salines were given and adrenalin injected subcutaneously. The bladder was then washed out daily with boracic lotion, and hexamine in 10-gr. doses was given four times daily. The wound remained healthy; the bowels moved normally, and eight days after the operation the tubes and stitches were removed. A tortoise cup was applied to the suprapubic wound to drain off the urine, and to make the patient more comfortable.

In the meantime, however, his mental condition became worse: he was intensely depressed, and was apparently in great mental agony. He was kept under constant observation, as he appeared to have suicidal tendencies. It was decided to dilate the stricture weekly, and on January 2, under general anæsthesia, a bougie was passed, but only the smallest size went into the bladder. Dilatation was again attempted on January 8, but entirely failed, and an external urethrotomy was performed. At the operation the stricture was found to be in the penile portion of the urethra, was 3 or 4 in. long, and was hard, fibrous and mobile. It was partially divided and retrograde dilatation was attempted.

On re-opening the supra-pubic wound a large quantity of green, foul-smelling pus was evacuated (no evidence of this cystitis had been indicated by urine or temperature), and a probe was passed from the inside of the bladder along the urethra and out at the distal end of the stricture. A silver catheter was then passed along the urethra and tied into the bladder. Patient was very collapsed after the operation, but gradually, after the symptoms of collapse had passed off, he began to improve, and by the beginning of February his pulse and temperature were normal, and he was having light diet. The urine was fairly healthy, the bladder still being washed out daily and hexamine was still given. During this period his mental suffering and pain became so acute that it was thought justifiable to dull him, and $\frac{1}{4}$ -gr. morphia suppositories were given at intervals, and a mixture of nepenthe and tincture of hyoscyamus was prescribed. The suicidal tendency, however, became more pronounced, and by straining he persevered incessantly to force the catheter out of the bladder. Finally the catheter had to be removed, as it was thought he would attempt to injure himself by pushing the catheter through the wall of the bladder, and thereby satisfy his suicidal designs. Consequently a rubber tube was passed into the bladder through the supra-pubic wound and held in position by sutures. The urine remained foul; his temperature was still high; he was restless, sleepless, intensely miserable and looked very ill. There was little change in his condition until July 4, when a large quantity of blood was returned with the bladder-wash. A solution consisting of 1 gr. of silver nitrate to 1 oz. of water was added to the boracic lotion, and with this the bladder was irrigated daily, and on July 10 the hæmorrhage ceased. He was still very depressed, in great mental pain, and was suffering from insomnia. Didial was given, the insomnia became less pronounced, and about the end of July there were definite signs of improvement in his mental condition. He became less depressed, less anxious-looking, and his mental suffering was evidently not so acute.

At the end of August he had quite recovered mentally; he appeared to be quite natural in every way, and was sleeping well without any sedative. The pulse, temperature and urine were normal. A urinal has been fitted to the supra-pubic wound, and, except for this, he has now completely recovered.

REMARKS.

This case apart from its surgical aspect, presents many points of interest as a mental illness and especially with regard to its causation.

The following points, I think, are worthy of consideration:

Firstly.—It is quite possible that the actual attack of melancholia may have resulted solely from the prolonged suffering—a suffering which at first produced a natural depression, and then, as it continued, set up a state of genuine melancholia.

Assuming that that was what did actually happen, the melancholia in this case might be considered to be of psychic origin. Some authorities are, I think, of the opinion that a disease like melancholia—or mania—may arise solely as the result of “mental trauma,” and it is well to remember this possibility when dealing with mental illnesses which present a type of history similar to what existed in this case, for undoubtedly there would be every justification for giving a good prognosis—no matter how severe and how prolonged the illness may be.

Secondly.—It might be argued that this case is essentially one of physical origin. Is it possible, for example—and the history certainly supports the contention—that the first thing to develop, coinciding with the period when the patient began to feel ill, was a toxæmia, at first local, from the bladder mischief which was present, and then general as it became more severe, and setting up, as it were, toxæmias of secondary origin?

Under these circumstances it is perhaps only reasonable to infer that the nervous system was attacked, and that the disease—melancholia—which was set up was purely of toxic origin.

Thirdly.—In view of this patient's history, his heredity, his natural disposition and his previous attacks, we are justified in concluding that he was the type of person who would readily develop a mental illness under adverse circumstances. That adverse circumstances were present in this case there is not the slightest doubt.

Were these the means of lighting up a mental illness which had been lying latent, and the true nature of which—from the mental point of view—is obscure or unknown?

Finally.—In connection with this case there arises the question as to what extent, if any, “repression” acted as a causal factor of the acute mental attack.

Here we have a patient—a cultured, refined and sensitive man—living his life possessed of the knowledge that in his “early days” he had contracted some form of venereal disease, and knowing, moreover, that as the result of that he was suffering from some definite result of that disease brought on by his own indiscretion.

It is only natural to believe—and, indeed, it was actually the case—that this patient at times brooded over his past. Added to this state of mental misery, constantly present in the subconscious and

setting up much mental turmoil, there was physical suffering, and of a kind which at times was very severe and distressing.

It is quite conceivable that in time he would reach a stage when the mental and physical suffering was too severe to allow him to hold himself in check any longer: The internal turmoil caused by this repression forced an exit, and showed itself in the picture which he presented—one of restless melancholy and despair.

As a result of this his physical health, already considerably reduced, became more impaired; normal functioning of his tissues and of the "various systems" was no longer possible, and he became an easy prey to poisons from the intestinal bacteria or to toxins or auto-intoxications. Now in the grip of mental suffering and physical disease he remained helpless and tortured, until Nature, aided by appropriate medical treatment, brought him relief.

It is therefore quite easy to recognize in this case the importance of the repression, and to believe that conceivably it may have acted as an important causal factor.

I have to thank Dr. G. Rutherford Jeffrey, Medical Superintendent, Bootham Park, York, for permission to publish the above case.

Medico-Legal Notes.

REX *v.* CHARLES BOYLE.

This case was tried at the Glasgow High Court of Justiciary, on June 30 and July 1 and 2, before Lord Ormidale.

The accused man was charged with the murder of his mother and of two children of a neighbour, on May 31. He was 22 years of age, and was a cripple from infantile paralysis. He had been an inmate of Stoneyetts Mental Institution, after having attempted to commit suicide by drinking ammonia. He had escaped from the institution, and it does not appear that any special steps were taken to recapture him. Later he had attempted to commit suicide by drowning. From 1919 onwards he had been frequently convicted of assault and of other offences. He had cut the throats of his three victims, and then gave himself up to the police, stating that he wished "to get the rope," as he had not the courage to "do himself in." There was evidence that he had been drinking on the day of the crime, but on the other hand, several police officers stated that they observed no signs of drinking in him when he came into custody.

The defence was that of insanity, it being suggested that he had

committed the crimes while in a condition of psychic epilepsy. Alternatively, it was put forward that his mental condition was so unsound that he was only partially responsible for his actions.

Prof. Glaister, of Glasgow, had examined the accused on two occasions, and expressed the view that he was sane, holding that any abnormality at the time of the crimes was due to the effects of alcohol. The *post-mortem* evidence indicated that the assaults had been of an exceedingly brutal character. Prof. Glaister recognized the existence of the condition known as psychic epilepsy, defining it as "a staggering of the brain function for a short period." He agreed with counsel for the defence that it was difficult to understand the mentality of a man who murdered his mother and two children who were strangers to him. Similar evidence was given by Dr. Anderson, and by Dr. Garry, the Medical Superintendent of Duke Street Prison, Glasgow.

The defence called Dr. James H. MacDonald, Medical Superintendent of Hawkhead Mental Hospital. He had examined the accused on June 25. He considered that the previous history of the accused, as detailed above, gave indications of psychic epilepsy. He had found that the accused had a clear recollection of the events of the afternoon of the day of the tragedy, but that his recollection of subsequent events was blurred until the time when he was charged at the police station. He considered that the attack on two children whom he did not know was the act of an insane man, and he doubted if the effects of drink were alone sufficient to account for it. Had he seen the accused on the evening of the crime he thought he would have certified him as insane.

The balance of the medical testimony would appear to have been decidedly against the defence of insanity. And counsel withdrew that defence, and advised the accused to plead guilty to culpable homicide, setting up the defence of partial responsibility. This was accepted by the prosecuting counsel, who stated that this plea did not depend upon the question as to whether the accused was drunk at the time of the crime, intoxication being no defence in the eyes of the law.

The judge took the view that the prosecution had exercised a proper discretion in accepting the alternative plea. He considered that the accused could be held to be only partially responsible for his actions, and passed sentence of 15 years' penal servitude.

The case is of some interest as showing that the idea of a "limited responsibility" will, under certain circumstances, be accepted by lawyers.

REX *v.* JOHN CHRISTOPHER HIGGINS.

John Christopher Higgins was tried at the Supreme Court, Auckland, New Zealand, before Mr. Justice Stringer, in February, 1924. The newspaper report which has reached us is very incomplete, inasmuch as it contains very little information as to the actual facts of the crime charged against the accused, and we have been unable to obtain such information. But it would appear that Higgins went to the local school one morning and fired several shots with a revolver at the schoolmaster and some of the children, two of the latter subsequently dying of their wounds.

There was ample evidence that Higgins had for many years suffered from delusions of persecution, believing that the neighbours were constantly watching him, hearing all that he said, and poisoning his domestic animals. And at the trial the whole question was whether, at the time of the act, the accused came within the strict limits of the *McNaughton dicta*. On this point the medical evidence was not unanimous. Drs. Bull, de Clive Lowe, W. E. Williams and E. B. Gunson were of opinion that Higgins did not know the "nature and quality" of the criminal act with which he was charged. On the other hand, Drs. StL. H. Gribben (in charge of Tokanui Reformatory), T. G. Grey (Superintendent, Nelson Mental Hospital) and N. W. Murray considered that although suffering from chronic, systematized, delusional insanity, he knew what he was doing when he did the shooting, and also knew that he was doing wrong. Dr. R. M. Beattie (Superintendent, Auckland Mental Hospital) was of the same opinion as to Higgins's knowledge at the time of the act, but would not on the evidence before him make a diagnosis of insanity. He, however, admitted that Higgins might be insane.

The judge, in summing up, said that it was clear that Higgins suffered from delusional insanity. But he refused to express any opinion on the question of "responsibility," saying that this was entirely a question for the jury to decide. A verdict of guilty was returned, and Higgins was sentenced to death. The Executive Council, however, reprieved him, and commuted the sentence. We have no information as to whether he has been removed to a mental hospital or is still in prison.

The accused man had been insane for a long time. There was evidence that he had, on at least one occasion, threatened violence to others. But he was allowed to remain at liberty until he had actually committed a criminal offence. And the case is a good example of the difficulties which may arise from the application of the *McNaughton* formula. It has often been pointed out that

on a strict application of this formula, very many inmates of our mental hospitals would have to be held "responsible" for any criminal act which they might commit. In practice much depends upon the direction in which public sympathy (as represented by the jury) runs. In many cases, such as that of the murder of a child by its mother, this sympathy is for the accused, and the McNaughton rule is interpreted very loosely. In such a case as that of Higgins, the natural indignation at the murder of two school-children turns the scale in the other direction.

Occasional Notes.

Committee on Dietaries in Mental Hospitals.

THE Report of the Departmental Committee appointed with the approval of the Minister of Health by Sir F. J. Willis, Chairman of the Board of Control (England and Wales), to consider the dietaries in the county and borough mental hospitals, has been issued, and can be had from His Majesty's Stationery Office.

In reviewing the Board of Control's Report for 1919 we said: ". . . there is no question in our opinion that the dieting of the insane is a matter of the greatest importance in their treatment. The primary importance of vitamins is unquestioned, nor should the question of calories be neglected. But mankind cannot live on vitamins or calories alone, or both combined, if due regard is not paid to the appetite, cookery, digestibility, personal diathesis. Mass-feeding and *ad hoc* drastic weekly purging has no regard for the well-recognized tendency to neuro-vascular abdominal disturbances and colitic affections in those suffering from mental diseases and the neuroses"; and again, "It is a subject worthy of careful investigation and experiment, and economic factors such as cost, or the farm account, though important, are secondary matters."

Although the Committee in considering the dietaries were primarily to inquire into "what changes, if any, are desirable, and whether a minimum dietary should be fixed," their work has covered much wider ground, and embraced the supply, preparation, cooking and distribution of food, administrative improvements in kitchen control and equipment, finance, and other very important germane matters. In fact, in many respects the Committee's lines of investigation were those we have urged on the Board, and we are glad they have taken this wide view of their reference. Their report is all the more valuable for being comprehensive. No aspect of the

subject has been omitted or neglected. They called in the aid of expert scientific opinion whenever it seemed advantageous, and received oral evidence from medical superintendents, clerks and stewards, persons in control of kitchens, managers and engineers and cooks experienced in conducting large catering establishments, and from business men supplying kitchen equipment. Mental hospitals, general hospitals and catering establishments of various kinds were visited.

The Committee, as would be expected, first called for and received copies of the mental hospital dietaries then in use, which they reduced to calorie values, and submitted their results to the Quantitative Nutritional Committee of the Medical Research Council for examination and interpretation. The generally accepted calorie food requirements of the normal adult then were taken as a basis, and by anthropometric and other data their applicability to the insane ascertained, such conclusions being checked by special experiments in basal metabolism conducted at Springfield Mental Hospital. At the same time information as to the cost of existing mental hospital dietaries was obtained.

Thus equipped the Committee prepared a model dietary which they think scientifically adequate to meet the requirements of the insane, and which at the same time does not materially increase the present expenditure under this head. This they circularized round the mental hospitals for critical examination and opinion, and asking at the same time for an estimate of the cost of carrying out their proposals.

An account of their labours embodying their final conclusions and recommendations with several appendices fills a volume of 130 pages, and approximately 60,000 words. There are several plates and illustrations. The main report is divided into six sections, which deal respectively with the details concerning existing mental hospital dietaries, the dietetic needs of the insane, the model dietary, administrative improvements in kitchen control and equipment necessary to carry out the model dietary, the cost of the adoption of the model dietary, and conclusions and recommendations. There are eight appendices, the most important being the model dietary in detail, a report on the rate of basic metabolism of the insane, and a paper conveying anthropometric data concerning the insane.

It would be impossible in an "Occasional Note" or review to discuss adequately the endless number of important issues raised by the report; nor do we see any particular advantage in so doing.

Many, if not the majority of matters dealt with, can be viewed

from many different standpoints according as they are likely to affect individual mental hospitals situated in different districts, and with different potentialities and possibilities. There are, however, a number of matters of general applicability—guiding principles and suggestions—which are summarized in the Committee's conclusions and recommendations. Their importance demands some comment and a place in our pages.

The Committee's conclusions concerning existing dietaries are :

(1) That there is an undesirable inequality in the construction of dietary scales throughout mental hospitals, some being well balanced and thoughtfully designed, whilst others impressed us as lacking in ingenuity.

(2) That an unsatisfactory irregularity exists in the quantities of some staple articles of food supplied, a bare majority of diets being approximately correct in this particular (*i.e.*, supplying an average quantity), whilst the remainder were either obviously deficient or possibly excessive.

(3) That insufficient attention is paid to palatability and attractiveness, especially in the matter of the provision of a reasonable variety of dishes, breakfasts and teas providing the most common evidence of this defect.

(4) That although the details with which we were provided did not enable us to construct an absolutely reliable arithmetical estimate of the value of each diet scale (in terms of proteins, fats, carbohydrates and calories), the result of analysis proved useful as confirmatory evidence, in cases where other indications suggested inadequacy or excess.

(5) That it proved especially difficult for us to ignore the great difference that exists between dietaries showing the lowest and highest calorie values respectively, justifying a suspicion that the supply of food in the former is insufficient. This conclusion received support from the increased incidence of tuberculosis amongst males in the 12 institutions providing dietaries of the lowest arithmetical value.

(6) That there seems to be some ground for suggesting that mental hospital dietaries may be deficient in certain accessory food factors (vitamines), probably deficient in fat-soluble A, and possibly also in water-soluble B.

(7) That, when markets are available, some modification in the usual methods adopted for obtaining supplies is desirable, with a view to securing a greater variety of meat foods, with due regard to economy.

(8) That every effort should be made to maintain a sufficient supply of high-grade milk, the daily amount provided being

inadequate in some mental hospitals and unduly restricted in others, and that, in order to secure good quality, especially in the matter of fat content, routine analysis is essential.

(9) That there are grounds for the suggestion that the complete substitution of margarine for butter has eliminated one of the most valuable sources for the supply of fat-soluble A, and that the partial reinstatement of butter is desirable.

(10) That some institution dietaries would be improved by the more frequent and regular supply of fresh (especially green) vegetables, and fruit, and that, in order to carry this into effect, the close co-ordination that exists in many institutions between the farm management and the person responsible for kitchen supply should be universal.

(11) That although some mental hospital kitchens have been kept up to date, there are still many that are so inadequately equipped as to be incapable of anything more than the simplest routine cookery, whilst there are a large number that would be capable of still better work if provided with improved facilities.

(12) That there is need for greater attention, in many institutions, to kitchen organization, methods of transport, and ward equipment, in order that the supply of hot food to patients may be secured.

(13) That there is reason to believe that smooth working, efficiency and economy would result from the placing of all duties relating to the supply, preparation and distribution of food under the supervision of one individual, who should be responsible for their proper execution.

The results of the Committee's investigations into the net energy requirements of male and female patients in mental hospitals in terms of calorie values are :

<i>Males—</i>	Calories.
11 hours' sleep at 71·1 (basal metabolism)	. 782
8 hours awake at 92·4 (basal + 30 <i>per cent.</i>)	. 739
5 hours' work, <i>viz.</i> , 5 hours basal = 356 + 400	
calories . . . . .	. 756
	<hr/>
	2,277
Add for locomotion. . . . .	. 300
	<hr/>
	2,577
Add 10 <i>per cent.</i> . . . .	. 258
	<hr/>
Total . . . . .	. 2,835
	<hr/>

Females—

11 hours' sleep at 59.4 (basal metabolism)	653
8 hours awake at 77.2 (basal + 30 <i>per cent.</i>)	618
5 hours' work, <i>vis.</i> : 5 hours basal, 297 + 400	
calories	697
	<hr/>
	1,968
Add for locomotion	300
	<hr/>
	2,268
Add 10 <i>per cent.</i>	227
	<hr/>
Total	2,495

Or approximately 2,800 for males and 2,500 for females.

These are standard minimum figures applicable to the ordinary patient, including the sick and infirm.

The model dietary, the details of which will be given later, has this minimum standard for a basis. The question of the advisability of diets of different energy values for workers and non-workers is discussed at length by the Committee.

They express themselves as not satisfied that reliance should be placed upon additional food as a bait to induce patients to employ themselves, and suggest the establishment of a token system, which would enable patients to purchase luxuries, such as tobacco, sweets, etc. Additional calories are only required by individual patients who are really actively employed. Without committing ourselves to the necessity of a token system we thoroughly agree with this view. They divided the mental hospital population into two categories: (*a*) hard workers, moderate workers, light workers, non-workers (mental reasons), and turbulents; (*b*) debilitated, the sick and bedridden. They estimated that 75 *per cent.* belonged to (*a*), and it is to these that their model dietary applies. Thus it became necessary to make an adjustment of the standard minimum figures in respect of the 25 *per cent.* (*b*) infirm, especially as from 50 to 60 *per cent.* of the 75 *per cent.* (*a*) were actively employed. They therefore added 15 *per cent.*, which brought up their estimates of the physiological requirements of the persons to whom the model dietary applies to males—3,220 calories; females—2,875 calories. The daily nutritive and calorie values of the model dietary are as follows:

Sex.	Proteins (<i>gram.</i>)	Fats (<i>gram.</i>)	Carbo- hydrates (<i>gram.</i>)	Energy values in calories.
Males	97	123	417	3,255
Females	89	118	370	2,978

which closely approximates the Committee's basic estimates.

For some months many of the matters dealt with by the Committee were the subject of investigation by the medical superintendents of the London County Mental Hospitals, which led ultimately to the Council adopting in July, 1923, the dietary and diet administration outlined in a report published in our October issue of 1923 (pp. 586-591). The results of two or more independent investigations on the same subject are always interesting and instructive.

This new London dietary is applicable to all patients except those sick and infirm and others needing special dietary (including recent acute cases, etc.). It is provided, however, that certain deductions should be made in the case of non-working patients who do not, for other reasons, need all the energy values supplied by the scale. The daily nutritive and calorie values of the London dietary can be expressed as follows :

Sex.	Proteins (gm.).	Fats (gm.).	Carbo- hydrates (gm.).	Energy values in calories.
Males . . .	110	90·85	517·48	3,417·5
Females . . .	100·75	88·45	479·06	3,199·6

These figures are inclusive of 10 *per cent.* undigested and wasted.

The London report says : " Under the proposed scale a male working patient is to be provided with the energy and nutritional value of 3,075·75 and a female of 2,879·64 calories a day, and a non-working male patient is to have 2,750·85 and a female 2,527·74 calories a day, after deducting 10 *per cent.* undigested and wasted. Bearing in mind, however, that on an average at least 60 *per cent.* of patients on ordinary diet are working patients, it is suggested that the minimum daily calorie value, including 10 *per cent.* waste, over a week's issues when calculated on the total number of patients on ordinary diet should not fall below males 3,200, females 3,000—figures which compare with those given by various dietetic authorities which are quoted above."

It will thus be seen that there is not a startling difference in the conclusions and the principles on which they are based of these two bodies on these aspects of the subject.

We now reproduce the Committee's diet scale in detail :

THE MODEL DIETARY.

FOR ADULT PATIENTS DURING WINTER MONTHS (OCTOBER TO MARCH, INCLUSIVE).

Breakfast.

Males	6 oz. bread	} daily.
Females	5 oz. bread	
Tea, coffee or cocoa	1 pint	
Margarine or butter	$\frac{1}{2}$ oz.	

With one or other of the following extras.

Galantine of beef, brawn (beef or pork), veal loaf, breakfast sausage, corned beef, bacon, rissoles, black pudding, fish cakes, kedjeree, kipper, bloater, haddock, egg, marmalade, jam, cheese, macaroni cheese, or porridge.

The allowance for each patient for breakfast every other day is 2 oz. of any of the above-mentioned prepared meats, 4 oz. dried fish, or 1 oz. cheese or jam.

On alternate days with the above $\frac{1}{2}$ pint porridge shall be supplied during the winter months.

The rotation of the breakfast meal shall be altered each month when the sequence of dinner meals is reconsidered.

Butter should be mixed with margarine in the proportion of 25 *per cent.* of the former to 75 *per cent.* of the latter, or be given ($\frac{1}{2}$ oz.) in place of margarine at seven breakfasts or teas (at least) during each two weeks.

Summer.—Porridge may be dropped entirely during the months April to September inclusive, and its place taken in sequence by stewed fruit, marmalade, jam, or one or other of the "extras" mentioned above. In no case should breakfast consist of a beverage and bread and margarine (or butter) only.

Dinners.

October–March.

—	Allowances.		Remarks.
	Males.	Females.	
<i>Meat</i> , uncooked, and including bone	*6 oz.	*5 oz.	—
<i>Bacon</i> , boiled, ditto	3 "	2 $\frac{1}{2}$ "	—
<i>Fish</i> (including bone-cleaned, ready for cooking)	8 "	7 "	—
<i>Rabbit or meat pie or pudding</i>	20 "	17 "	See formulæ.
<i>Soups</i>	1 pint	1 pint	"
<i>Stews</i>	1 "	1 "	"
<i>Potatoes</i> —			
Only with fish	9 oz.	7 oz.	Unpeeled and uncooked.
In addition to fresh vegetables with roast or boiled meat dinner	7 "	6 "	"
With stew	8 "	8 "	"
<i>Fresh vegetables</i> — <i>i.e.</i> , greens, carrots, parsnips, turnips, onions, etc.	6 "	6 "	"
<i>Bread</i>	2 "	2 "	—
<i>Puddings</i> (flour), such as jam, treacle, raisin, currant, date, fig, ginger, bread, etc.	8 "	8 "	See formulæ.
<i>Puddings</i> (milk) — rice, sago, tapioca, semolina	$\frac{1}{2}$ pint	$\frac{1}{2}$ pint	"
<i>Bread and cheese</i> —			
Bread	2 oz.	2 oz.	—
Cheese	1 $\frac{1}{2}$ "	1 $\frac{1}{2}$ "	—

Alternative dinner dishes, more or less dependent upon local taste, are hot pot, cottage pie, shepherd's pie, sea pie, liver and bacon, pork and beans, sausages, curried meat or rabbit, haricot ox tails, tripe and onions, etc.

* If ovens of known temperature are used, and proper care is taken in carving, these figures should be equivalent to more than 3 ozs. and 2 $\frac{1}{2}$ oz. of cooked meat for males and females respectively. These amounts are for roast, boiled, or steamed meat dinners. If ordinary coal ranges or gas ovens are used for cooking, a larger amount of raw material will probably be required to yield the same result.

An apple, orange or banana should be given for dessert at least twice a week throughout the winter months.

Summer.—During the months April to September, inclusive, some of the hot dinners should be replaced by cold, accompanied by salads, lettuces, radishes, tomatoes, etc. Fresh fruit puddings or stewed fruit should be substituted for some of the heavier suet puddings on other than soup days, and fresh uncooked fruit should be regularly supplied when obtainable at reasonable cost.

Tea.

October–March.

Males	5 oz. bread	} daily.
Females	.	.	.	.	.	3 oz. bread
Cake	.	.	.	.	.	3 oz.
Margarine or butter	.	.	.	.	.	$\frac{1}{2}$ oz.
*Tea	.	.	.	.	.	1 pint

* Cocoa or coffee may be issued if preferred.

With one or other of the following extras.

Jam or marmalade, 7 times per fortnight. . . 1 oz. each patient.

Meat or fish paste, bloater, or shrimp and

salmon, etc., 7 times per fortnight . . . $\frac{1}{2}$ " "

The supply of cake should be varied, being made either with currants, sultanas, raisins or carraway seeds. Scones, buns or oatmeal biscuits of the same weight may be issued in lieu.

If preferred, the orange or apple suggested as an addition to the dinner meal may be given for tea twice weekly, replacing the meat or fish paste on these days.

Summer.—During summer months the jam or pastes should be replaced by fresh vegetables or fruit. Lettuces, onions, tomatoes, radishes, watercress, mustard and cress or beetroot are desirable foods, for the regular provision of which arrangements should be made.

DIETARY SCALES.

Tables follow which show a sequence of dinner meals for male and female patients, respectively, covering a period of four weeks. They are designed to demonstrate in the clearest manner possible the amount and kind of food that, in our opinion, should be provided for this particular meal (during winter months) in order to secure sufficiency and variety. It is suggested that the order of these meals should be changed at the end of each four weeks, so that no particular dish can become associated with any particular day.

The Committee estimate that, given adequate kitchen equipment and economical methods of purchase, the cost of the model dietary per head per day for patients in county mental hospitals should not exceed 8·5 pence and for those in borough institutions not more than 8·75 pence, or 4s. 11 $\frac{1}{2}$ d. and 5s. 1 $\frac{1}{4}$ d. per head per week respectively.

The general report closes with a list of conclusions and recommendations:

1. That there should be more uniformity in the construction of mental hospital dietary scales, especially in regard to—

- (a) the character of food given;
- (b) its total amount;
- (c) the amounts of certain staple articles of diet; and—
- (d) the avoidance of monotony.

2. That the average calorie values of dietaries for ordinary patients in mental hospitals (including workers, and excluding those on substituted diets) should not fall below 3,220 for males and 2,875 for females.

In the notice of the London Mental Hospital Dietary it was stated that it enunciated certain important principles and methods of dietary administration. These express our own views and are as follows :

(a) It fixes a minimum value of the daily nourishment to be given generally to patients who are not specially and individually dieted.

(b) It provides machinery for variation (i) to prevent monotony, (ii) to suit groups of patients, *viz.*, epileptic, working, chronic, turbulent, etc.

(c) It provides machinery to deal with the waste of food because of its unpopularity and without deteriorating the food value of the total issues.

(d) It leaves to the individual hospital the selection or creation of recipes, menus, and methods of distributing food.

(e) It provides machinery for the supervision of the nourishment of the patients by the Committee of Management.

(f) The issues, being based on the requirements of 100 patients per week, will allow of economy being effected for bulk feeding as experience of the scale is gained. These issues can be varied from time to time by the Mental Hospital Committee without any disturbance of general principles and methods of administration. Thus any scale of issues or formulæ or menus can be readily carried out by a mere adjustment of the scale appended to the dietary.

We think that diet construction, so long as the diet is of adequate energy and vitamine value and is attractive and appetizing, is of secondary importance to diet administration. Any diet regulations designed to be applicable to the whole country should be limited to important principles and methods such as formulated above. Individual hospitals and authorities responsible would work out their own salvation in these matters, having regard to the varying local conditions and types of patients. Rigid diet scales and menus, we hope, will soon become things of the past.

3. That to insure the presence in dietaries of necessary accessory food factors (vitamines) there should be a partial reinstatement of butter as a regular article of diet, a supply of milk in greater quantity, an increased provision of green and other vegetables, a more common use of eggs, a free administration of salads and fresh fruit, and a more general use of wholemeal or germ bread.

In the body of the report the Committee say : " We would also urge that butter should be substituted for some of the margarine now issued. In recommending a 25 *per cent.* substitution, as minimum, we have been influenced by contingent cost ; but for this we should have been tempted to advocate a more radical change. We

think, however, that if the 25 *per cent.* substitution is adopted, the regular supply of milk increased, eggs given occasionally, green vegetables made a regular issue, and the use of uncooked green food and fruit encouraged, all reasonable vitamine requirements should be met."

4. That, as these improvements would be secured by the adoption of our suggested model dietary, and as, under proper conditions, the cost of this dietary at present prices should not exceed 8½d. per head per day for county mental hospitals and 8½d. for borough institutions, we commend its general adoption in public mental hospitals, with such modifications as may be necessary to meet varying local conditions.

5. On grounds of economy as well as efficiency it is important—

(a) To establish a unified food department in each institution, under a competent and responsible head, for dealing with the supply, cooking, distribution, and service of food. (In the text the steward is recommended for the post.)

(b) To provide each institution with adequate kitchen equipment.

(c) To endeavour to secure, as kitchen workers, the services of persons more highly skilled in cookery by making these posts more remunerative and attractive. This refers more particularly to the responsible head. And—

(d) To pay greater attention in many hospitals to other points dealt with in the body of this report relating to the cooking, distribution and service of food.

6. That substantial economies can be secured by paying greater attention to the terms of specifications and contracts, and by taking more advantage of wholesale markets.

7. That, in regard to food expenditure, separate accounting, as between patients and staff, should be the rule in all mental hospitals.

8. That it would be a great advantage if an officer skilled in these details could be appointed on the Board of Control staff temporarily, to advise and assist local authorities in regard to the adoption of the model dietary.

In conclusion we congratulate the Committee on the results of their heavy labours. They have spared no time or trouble in their endeavour to arrive at a real solution of a question which is of the vast importance to those who are being cared for in the public mental hospitals. Nothing but good can come from a careful

study of their report, and though it cannot be expected that their recommendations will be generally adopted in their entirety, we have no doubt that many of them will, and that the information collected by them will be of the greatest value and assistance to hospital committees and medical superintendents and others responsible for the welfare and treatment of the mentally afflicted.

Part II.—Reviews.⁽¹⁾

Addresses to Mental Nurses: A Series of Fifteen Lectures delivered to the Nursing Staff of the Retreat, York, by Various Authorities.
Edited and arranged by BEDFORD PIERCE, M.D.Lond., F.R.C.P.
Lond. London: Baillière, Tindall & Cox, 1924. Demy 8vo.
Pp. viii + 285. Price 7s. 6d. net.

It was a happy thought which led Dr. Bedford Pierce to collect, edit, and publish these remarkable addresses, for it would indeed have been a calamity had they remained hidden in the archives of the Retreat and not given out to the nursing world to act as "beacon lights," guiding the footsteps of all those ambitious of attaining the spirit as well as the art of mental nursing.

He is deserving, too, of the appreciation of nurses generally, of medical men, and of the public, who are all given the opportunity of becoming acquainted with the innermost and, in a sense, the sacred thoughts of men whose whole lives have been devoted to psychiatry. What subject is of more absorbing interest than the study of that highest expression of human nature—the mind,—or of such importance to the individual and to the nation as the comforting and healing of the mind diseased and mental hygiene?

Incidentally these addresses also reveal the fact that men of broad outlook, sympathy and tenderness, and of great understanding have in the past led us and still lead us. Some in their ignorance think otherwise and not always are they thus described, but we have good reason to be proud of our leaders and grateful for their guidance and inspiration.

Again, this book can be regarded as a monument to the work of that great English pioneer of modern psychiatry—Tuke, of the Retreat at York. It is truly appropriate that those who have since been in the van of the fight against the centuries-old attitude of superstition and apathy to the mentally afflicted should make a pilgrimage to the Mecca of our vocation to give utterance to those watchwords and experiences a knowledge of which is of such importance to the "rank and file," without whose whole-hearted and intelligent co-operation the mind-doctor would be helpless.

On this occasion it is not strictly our purpose to criticize. These addresses are by members of our Association, or were while they lived. Their words embody all that our Association stands for,

⁽¹⁾ We regret that owing to the indisposition of a reviewer several important reviews are not completed and are held over until our next number.—Eds.

in addition to instruction on a variety of subjects of interest to mental nurses. Our purpose is rather to welcome a publication we have thought long overdue and one equally valuable to both nurse-student and teacher. From its pages many lessons can be learned and an abundance of material obtained for nursing lectures—materials not to be found in the ordinary text-books. It is thus a book which should be in the hands of every mental nurse and be available for the use of medical officers and others teaching and training them. There is much, too, in these addresses of interest and encouragement to the public generally, and especially to those who need a steadying influence when reflecting on the work of the mental hospitals and the treatment of the insane in the country.

We will now give a brief *résumé* of the contents of this book. The addresses are fifteen in number, and were all delivered over a period of years to the nurses of the York Retreat—for the most part, we imagine, as the opening or introductory lecture at the commencement of teaching sessions. Some biographical particulars as regards the lecturers precede each address.

The first address is by Dr. Bedford Pierce, late Superintendent for many years of the Retreat. His subject is "Pinel and Tuke: Historical Introduction." As would be expected from other writings by the author, it is a literary production of first merit, as indeed is his final address on "Character and Outlook."

The late Dr. David Yellowlees follows with "A Talk with the Nursing Staff." This much venerated and astute Scottish physician opines that—

"Kindliness means kindness and something more. It means a pleasant way of doing a kind thing."

As we all know, a kind nature cloaked by a gruff manner is useless in dealing with mental patients. In these days of medals and certificates, administrators of mental hospitals would do well to remember that—

"Perhaps the best test of good nurses, the one thing on which I would be willing to base my estimate of what they are really worth, is the willingness of the patients to help them."

Dr. Bevan Lewis in the third address treats of "The Formation of Character." In places he touches a real eloquence:

"The nurse beyond all others can enter the holy of holies of the human soul, and in the most sacred moments communicate that comfort which poor humanity so truly depends upon." "Therefore, remember the world is what you make it, or, in other words, is a reflection of your own mind." "If your judgments are harsh, if you see chiefly the unlovely in your fellow man, be assured the unloveliness is in yourself also."

Sir Thomas Clouston, inimitable as a lecturer and prince among teachers, speaks of "How the Scientific Way of Looking at Things Helps us in our Work." He discusses "the light that science throws on our rules, our environment and our work, and the help it gives us." One quotation must suffice:

"Our mental hospital experience should add much to the interest with which we study our fellow men and women in the world outside. Insanity is often

exaggerated sanity. Suspicion is a most necessary protection in life. But exaggerated suspicion is a form of mental disease. High spirits are a delightful quality in our friends. The perpetual flow of talk of subacute mania is a trying form of insanity to put up with. Impulsiveness is a charming quality in some young folk. The impulses of our patients towards suicide, disorder and violence are some of the most disturbing elements in our professional work. Reticence gives power to a man in authority. The silence of some of our patients wears on our nerves."

The fifth address is by Dr. R. Percy Smith. As would be expected, he displays his usual common sense and acumen in dealing with "The Principles of Mental Nursing." His address is replete with judicious advice. His respect for mental nurses and mental nursing as a calling is shown when he says:

"Just as the old style 'Sairey Gamp' nurse has been replaced by the modern highly-trained general hospital nurse—a change largely due to the efforts and example of Florence Nightingale—so has the 'keeper' been replaced by a body of men and women who in their own special line of work are the equals in every respect of nurses in other branches of medicine. In fact, I am always in the habit of saying that I would sooner have a nurse trained in a mental hospital for a case of bodily illness than a general hospital-trained nurse for a case of mental illness."

He advises the nurses to continue to study and improve after passing their professional examinations, and, like medical men, keep up their knowledge. In our review of our Association's *Handbook* we claimed that its comprehensiveness and advanced teaching would permit of this.

One of the best known of these addresses is that by Dr. Charles Mercier—the sixth of the series. It is now a classic, and is devoted to "The Two Essentials in Mental Nursing." Really it is a remarkable and eloquent homily on sympathy and some trenchant remarks on capability. Capability is not cleverness but rather trustworthiness:

"A stupid person who is capable is worth a thousand clever persons who cannot be trusted." "The ability of the clever person enables him to pass examinations with ease and to win prizes; while the capability of the capable person enables us to rely on the certainty that he will do his duty."

How true this is of all professional walks of life! As regards sympathy, he preaches from that famous definition of charity given by St. Paul in 1 Cor. xiii, and makes every section of it applicable to the mental nurse's life and duties. What St. Paul describes as charity is Dr. Mercier's idea of sympathy.

Dr. C. Hubert Bond's address comprises an interesting and instructive description of Long Grove Mental Hospital and its medical and nursing administration.

The next lecture, the eighth, is by Sir George Savage. He talks in the delightful way that was usual with him. He is full of humour and good-natured irony. His practical observations show his ripe wisdom and his vast experience of the subject dealt with, which is "Private Nursing of Mental Patients." His concluding advice is:

"Be to your own selves true, never forgetting that you do not live unto yourselves."

Sir John Macpherson selects a subject about which there are few better qualified to speak. He deals with "Mental Diseases

regarded as Disorders of the Instinct" from a psychological and biological point of view.

Dr. James Middlemass's address is a learned but nevertheless practical dissertation on "Night Nursing," and Dr. Henry Yellowlees, now Medical Superintendent of the Retreat, gives his hearers much food for reflection in a remarkable address on "Thought and Conduct."

Dr. Henry Devine gives the twelfth address, which is on "Occupational Therapy." He shows an intimate and practical knowledge of the difficulties which surround the application of occupational therapy to insane patients, and as usual sees them from the other person's standpoint, and is both impressive and effective.

Sir Robert Armstrong-Jones is happy in his choice of the subject of his address. He speaks of "Hopefulness," and is sympathetic and encouraging. The remaining address is by Miss Marguerite Wilson, Assistant Medical Officer at the Retreat, who deals with "The Ductless Glands." Her style is remarkably clear, and her handling of a most intricate subject could not fail to impress her audience.

We trust that these Retreat addresses will continue, and another series be published in due course of time. JOHN R. LORD.

The Evolution of Man. By G. ELLIOT SMITH, M.D., F.R.C.P., F.R.S. Oxford: Humphrey Milford, 1924. Demy 8vo. Pp. vi + 159. Price 8s. 6d.

In this volume of essays Prof. Elliot Smith discusses the factors which led up to the development of the human family, and sets forth his own views concerning the genealogy of the various palæontological remains which have been unearthed during the past half-century. The Foreword is largely explanatory of two diagrams representing the relationships of the order primates and of the different genera, species, and races of the human family. The incompleteness of many of the "fossil" remains of man has led to a considerable amount of speculation. Particularly is this the case with the Nebraska tooth, which has been assigned by various authorities respectively to the primates, to some species intermediate between anthropoids and man, and to a primitive ancestor of man. Prof. Elliot Smith admits that a single tooth is a hazardous basis for deciding the characteristics of its owner. The development of the human family has been accompanied by a progressive bleaching of the skin and hair—a quality which is most marked in the Nordic race. This bleaching, however, is not in itself an indication of mental or physical superiority, as it may be associated with the retention of various primitive characteristics. The wanderings of the primates are illustrated by a map in which the lemurs, tarsioids, and monkeys are represented as having spread into the old world from a centre in North America, subsequent to which there occurred a split into the catarrhines and the anthropoids.

The rest of the book contains addresses delivered in 1912, 1916,

and in February of this year. Chapter I is devoted to the explanation of the factors in the evolution of the brain which have contributed towards the predominance of *homo sapiens*. The mammalian brain allows of an infinitely greater ability to profit by experience than is the case with any other class of animal. Development essentially implies an ability to make use of individual experience in adaptation to environment, and necessitates an organ of associative memory, which is the *neopallium* of the mammalian brain. The neopallium is to all intents and purposes the *sensorium commune* which was postulated by Aristotle and others. Intelligent adaptation involves progressive changes in the brain. The olfactory apparatus of the *archepallium* has become overgrown by the *neopallium*, which is devoted to visual, auditory, tactile, kinæsthetic and motor functions. In the prosimians which existed at the close of the Cretaceous period and which are represented at the present time by *Tarsius*, there was a great increase in the size of the visual cortex. This development allowed of a greater range of adaptation, and awakened the curiosity to examine near objects and to use the kinæsthetic and motor functions to a greater degree of refinement. The primate brain developed still further on the same lines. Prof. Elliot Smith says: "I believe that the germs of man's intellectual pre-eminence were sown at the very dawn of the Tertiary period, when the first Anaptomorphid (fossil tarsiod) began to rely upon vision rather than smell as its guiding sense. In all the succeeding ages the fuller cultivation of the means of profiting by experience which the tarsiod had adopted led to the steady upward progression of the primates."

Chapter II, entitled "Primitive Man," contains a general survey of our knowledge regarding extinct members of the human family and a description of the more important "fossil" remains. The Rhodesian and Neanderthal specimens are regarded as belonging to offshoots from the main stem, which eventually gave rise to the modern races. As regards *pithecanthropos*, found in Java, whose exact relationship is still in dispute, it was pointed out by Prof. Dubois that an anthropoid ape with a cranial capacity as large as that of the Java skull would have had a stature four times that of a man. The femur of the same specimen is of human dimensions. The internal configuration of the skull also indicates an expansion of the posterior part of the second temporal convolution, the area which is associated with the appreciation of the meaning of the symbols of spoken speech. In a discussion about the significance of the acquisition of the power of speech and its bearing upon subsequent development, Prof. Elliot Smith takes the opportunity to declaim against the theory of independent origins of culture. He says, "Man's mental and moral attitude is, in a large measure, determined by those primitive instincts and emotions which he shares with his simian ancestors, but also by the influence, conscious and unconscious, of the atmosphere of traditions amidst which he has grown up." More especially does he protest against "the claim that the human mind has been undergoing some process of mechanical and automatic evolution, in

virtue of which it has passed through a series of 'culture epochs,' not as the result of the accumulation of knowledge and experience, but as the outcome of some blind and intangible change in the structure of the mind." Those who have read Prof. Elliot Smith's *Migrations of Culture* will remember his detailed discussion of this point. There is no "psychic unity" or "archetype of apprehension" in the human mind, but only the ability to profit by cultural contact. "Man's mental equipment was in the past, as it is at present, derived almost entirely from the members of the community amongst which he grew up, and such insignificant crumbs of knowledge as he was able to pick up from his own experience of a life at first not essentially different from that of an anthropoid ape." In a recent address before the British Association Prof. W. McDougall cited the conclusions of the Cambridge expedition of 1899 to the effect that coloured races differ little from white men as regards their sensory capacities, but that they have a definitely smaller innate capacity to develop general intelligence. Prof. McDougall believes that racial differences are to be explained rather by the relative strengths of instinctive tendencies than by any specialized racial or collective "unconscious." Prof. Elliot Smith holds that cultural characteristics are derived for the most part from the cloud of tradition and spoken testimony of society, and that nurture is more potent than nature.

The concluding chapter contains a *résumé* of the preceding observations on the development of the brain, and there is a reference to Dr. Head's theory of aphasia.

There is much in this book that should interest psychiatrists, although many psychological speculations will not be allowed to pass unchallenged. Prof. Elliot Smith has refrained from prophesy, and does not attempt to discuss to what end development may be tending. Unlike Sir James Crichton-Browne, he does not rejoice that men are taking a larger size in hats since the war, nor does he assure us in the comforting manner of Dr. Shruballs that we are not a degenerate race in spite of the gloomy findings of the medical boards. However, we are made to see dry bones live, and most readers should experience the awakening of a little pride in our far distant ancestry.

W. S. DAWSON.

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- (1) *The Appearance of Mind.* (2) *Aberrations of Life.* By JAMES CLARK MCKERROW, M.B. London: Longmans, Green & Co., 1923. Crown 8vo. Pp. 120 and 107. Price 6s. each.

In the first of these two books the author sets forth a mode of philosophic thought which he calls "Metapsychics." He defines three principles of "Life," or, as he prefers to say, of the "Tendency to Viable Equilibrium." These are—(1) "Viable Activity," which tends to be repeated; (2) "Unviable Activity," which tends not to be repeated; (3) "Action," which tends to occur at its proper period. The purpose of the treatise is apparently to show that these principles avoid the necessity for postulating the "Subject," and that they explain not only all sorts of physiological processes—

consciousness, instinct, development, behaviour and so on, but also various psychological axioms, such as cognition, conation and affection. The "Sense-Subject" is an assumption from the observation that organisms react to environment—a result made possible by the acquisition of locomotion; the "Thinking-Subject" is an assumption from the observation that mentality makes possible the passing of "Judgments of Objects." The author develops these themes at some length. In the second book an attempt is made to apply his theory to some of the abnormal phenomena of life and consciousness, *e.g.*, delusions, conflicts, dissociations, psychic phenomena, mania-melancholia.

Those who regard the logomachies of Berkeley and Kant as an evil dream of youth, and a psychology founded upon such party-walls as conation, affection, and cognition already out of date might indeed cry "*Cui bono?*" Do these books add anything to our knowledge? Do they carry us a single step further in our understanding of any of the phenomena of the universe? The author is a thinker, but his logic is of the armchair pattern. He uses exactly the subjective method which he is endeavouring to destroy. His theory reminds us of the "Autonomic Tensions" to which Kempffe attributes most of the psychoses—a sort of biological gyroscope which attracts attention when the direction of the vital processes is disturbed. And yet he is widely read. These two volumes teem with physiological facts and modern biological theories. The diction is clear and the style graceful. It is to be hoped the author will not expend all his energies on ploughing the metapsychic sands, but devote his leisure to nature study of some scientific value.

W. F. MENZIES.

A Bibliography of Eugenics. By Prof. SAMUEL J. HOLMES. University of California Press, 1924. Imperial 8vo. Pp. 514. Price \$5.00.

In his preface Prof. S. J. Holmes reminds us to some extent of the explorer who, having recently returned from a voyage of discovery, feels it his bounden duty to record the many hardships he has encountered by the way. So much labour was involved in compiling this bibliography that more than once, the author tells us, he was tempted to leave the work for pleasanter and more profitable pursuits. The fact is the science of eugenics is still in a primitive state. The following extracts may be quoted to demonstrate some of the difficulties that had to be faced: "It is a noteworthy circumstance that much of our knowledge of the topics covered in this bibliography has come from writers who were apparently unaware of the relation of their contributions to the problem of human evolution." . . . "There is a deal of rubbish written on this as upon most other topics." . . . "In the subject-matter with which we are concerned the literature is very much at loose ends; much is uncritical; and comparatively little is written with the competence of the highly trained specialist." There would seem to be need of a clearer conception and better

orientation in regard to eugenics. Moreover, it appears that too narrow a view has been taken by many writers on the subject. Prof. Holmes appeals for a wider outlook; he would have us think racially.

It is interesting to note that this bibliography grew out of a list of references collected during the preparation of one of the author's previous books known as *The Trend of the Race*. In order to make the work as complete as possible no pains have been spared. Many of the larger libraries which are to be found in different parts of the United States have been visited; the more important journals have been searched; and all the available bibliographical aids have been exhausted. The vastness and complexity of the subject may be gathered from the fact that the book contains no less than thirty-two sections bearing on its different aspects, not counting sub-sections. For instance, the section containing references on the heredity of human defect has four subdivisions, dealing respectively with the inheritance of feeble-mindedness, of epilepsy, of insanity, and of deafness.

The following are some of the topics dealt with: Heredity and evolution; genealogy; the problem of degeneracy; alleged increase of insanity; alcohol in relation to heredity; the hereditary factor in crime, delinquency, prostitution, pauperism and vagrancy; the inheritance of mental ability; race; the birth rate; birth control; immigration and emigration as related to the racial changes; consanguinity; the influence of age of parents on offspring; etc.

The author is to be congratulated on the result of his labours. As a result of a considerable amount of hook-and-eye work he has produced a volume containing several thousand references. Not only has he provided a guide to the existing literature on eugenics, but he has succeeded in classifying the subject more clearly in regard to its manifold aspects. This bibliography should prove of great assistance to the student of psychiatry as well as to the student of racial welfare.

NORMAN R. PHILLIPS.

Psychological Tests of Educable Capacity. His Majesty's Stationery Office, 1924. Pp. 248. 2s. net.

In July, 1920, the Board of Education appointed a committee to consider, *inter alia*, what use could be made in the public system of education of psychological tests designed to ascertain educable capacity. The report, which this committee has now issued, is of interest to a far wider circle of readers than those who are engaged in teaching, for it contains an able summary of the present state of knowledge on the subject of "mental tests." Avoiding the extreme claims which are made in certain quarters, the committee are quite definite as to the great value of mental tests. But the gaps in our present knowledge are pointed out, as is also the fact that these gaps can only be filled by careful scientific research. The committee recommends that this research should be undertaken by

the various departments concerned, acting in conjunction with the universities.

The serious drawback that many of the best-known schemes of tests allot far too high a value to linguistic facility is duly noted in the report, as is also the fact that our present tests are almost entirely confined to the estimation of intelligence. There are other factors which are of great importance, and which the present scales do not measure. The difficulty of devising suitable tests for these other factors is certainly great, but should not be insuperable. The use of "group tests" is now coming into fashion as a rough, preliminary method of grading a large number of subjects. So long as these group tests are confined to that end, and so long as it is recognized that they can never supplant the careful application of individual tests, there would seem to be no great objection to their use. The report points out that much fatigue to the examiner is involved in the application of individual tests. All who have experience in this connection are well aware of this, but the fact is often overlooked by others.

In its recommendations the committee lays much stress upon the necessity of having these tests made, and still more that of having them interpreted by persons who have had adequate training therein. "Results obtained from the application of individual tests by untrained persons should be received with the utmost caution, and are, in our opinion, almost devoid of value." This caution is especially needed when tests are used as a means of deciding whether any given subject is mentally defective. Indeed, as the committee points out, the diagnosis of mental deficiency ought never to be made by the use of intelligence tests alone. The report therefore urges that school medical officers should have due instruction in the use of tests, and in the many considerations which enter into the interpretation thereof.

In an appendix Dr. Cyril Burt, Dr. William Brown and other psychologists discuss the factors which are involved in the conception known as "general ability." M. HAMBLIN SMITH.

Report of the Commissioner for Mental Hygiene for the Union of South Africa, 1922-23. Cape Town, 1924. Pp. 40. Price 3s.

Dr. J. T. Dunston, the author of this important report, made an extended tour in Europe and America during 1921. He visited mental hospitals, psychopathic clinics, prisons and other institutions. As a result of the experience so obtained, he propounds a scheme for the better organization of psychological work in the country with which he is concerned. The many evils which result from the multiplication of administrative authorities are well known. To avoid these, Dr. Dunston advocates the co-ordination of all psychiatric work in one department. He proposes that the mental hospital, with its out-patient clinics, should be the centre for all such work in its district. The work would cover the schools, rescue homes, criminal courts and prisons, and would have much

to do with the administration of the Poor Law, and of various agencies which deal with child welfare and allied objects.

Dr. Dunston points out that delinquency is becoming recognized as more and more a medical question, and he urges that few delinquents can be dealt with properly without the skilled assistance of the psychiatrist. "The old method of punishment for the crime committed, without regard to the personality of the person committing the crime, has proved a failure." He proposes that all children brought before the juvenile court, all adults who have been convicted before, or in whom there is any doubt as to mental condition, and all habitual criminals, should be compulsorily examined by a psychiatrist. He is right. Leaving it to the court to decide whether such examination should be made has vitiated much of the proposed work on these lines in this country.

We shall be interested to learn whether Dr. Dunston succeeds in inducing his government to adopt this scheme. When this has been done, the question resolves itself into that of the provision of the necessary staff. We gather that, at present, an adequate staff does not exist. Its provision will be expensive. But the expenditure will be eminently remunerative in the end. South Africa has the advantage of being a comparatively new country, in which old vested interests have not become too firmly entrenched, and of having only a small white population. So the difficulties which will have to be overcome are not so great as in this country.

The report also contains the usual statistical tables. These are based on those of the American National Committee for Mental Hygiene.

M. HAMBLIN SMITH.

Part III.—Epitome of Current Literature.

1. Psychology.

The Jewish Mind in the Making. (*Mental Hygiene*, April, 1923.)
Friedman, E. M.

In considering the adjustments of the Jew to his environment, it must be constantly borne in mind that many of them are recent immigrants to an entirely new country, and the race has been subjected to the most trying conditions for some twenty centuries. These foreign-born are not of inferior stock or more prone to constitutional mental disorder than the native born, and the relatively high incidence of psycho-neuroses among immigrants arises from the sudden and sharp demands of a new environment. Their adjustments to the new social conditions are consciously forced and artificial, often appearing unnatural and incomprehensible. Frequently they are more energetic than the native, scoring a higher percentage of material successes, but being of the *parvenu* type, cannot settle down like the established native and swell the *clîèntele* of the neurologist. A sadder case is the gifted immigrant who

cannot find an outlet for his heritage of genius, breaking the bonds of deadly reality and laying the foundation of a psychosis in an atmosphere of his own imagination.

Though several of the more serious mental disorders, such as alcoholic insanity and general paresis, are relatively less prevalent in the Jew, he produces the largest percentage of psycho-neuroses, and this is only to be expected. The Jewish environment includes not only the economic and social pressure of the Gentile world throughout sixty generations, but also the Jewish spiritual and cultural institutions set up to reduce the effects of that pressure on its people. He has lived under a nervous strain for centuries, keyed to the utmost, over-exerting himself, and shows this in his intensity, lack of reserve, and apparent excitement. In flight or on the defensive for untold years the Jew has the mental reaction of hyper-adrenalism, and his exaggerated defence reactions are shown in his sensitiveness to stimuli, low threshold of consciousness, and self-depreciation, finding an outlet for his emotions in harmless gestures which react not outwardly, but inwardly. Further evidences of the effects of prolonged persecution are found in the strengthening of family ties, and his habit of retiring into himself or the society of his kind, for which he is often accused of being anti-social and clannish.

The exclusion of the Jew from many occupations and his sudden expulsions led to concentration of wealth in portable form, and he became the moneylender and international banker. Sedentary occupations and restricted muscular expression play no small part in the high tension of Jewish mentality. As his existence depended upon prompt and adequate responses he matured early, and having missed his childhood, lived an abnormal adult life. Perhaps the early maturity of the Jew is part of a compensation of Nature, and the relation of physiological precocity and fecundity to intellectual capacity and mental well-being might be elaborated.

It is only the sublime faith of the Jew which has enabled him to maintain his equilibrium throughout such adverse conditions, and the loss of this faith in the modern Jew, causing him to turn to new creeds and fads, accounts in some part for his abnormal conduct.

Any people subjected to the same difficult conditions would develop traits similar to the Jew, and probably Christian Armenians under Mohammedan rule are the nearest case in point. Change his environment to one of freedom, and in time he will become a better social mixer and lose his sense of inferiority. In this respect the environment of Palestine is said to have a remarkably beneficial effect in one generation. The solution of the problem of mental hygiene of the Jew is obvious. Assimilation and absorption by inter-marriage will terminate the separate race, and in a non-repressive environment he will work out some philosophy to rationalize his historic culture with that of modern society.

A. WILSON.

- (1) *The Mental Tests of a Superior Child.* Dvorak, H. D.
- (2) *Mental Hygiene and our Universities.* Morrison, A. W.
- (3) *The Reaction of College Students to Mental Hygiene* (*Mental Hygiene*, April, 1923). Laird, D. A.

(1) The rarely occurring child of exceptional intelligence is too often unrecognized by school teachers, and does not receive the necessary advancement which enables him to develop to the utmost of his abilities. Such a child in too low a class may appear dull by reason of insufficient stimulation to his interest, elementary tests fail to measure properly the scope of his intellect, and he may be promptly placed in a class still lower. The attitude of superiority and indifference which school authorities usually adopt towards parents and psychological examiners is responsible for this state of affairs, for a little co-operation between them would elucidate significant facts of the child's early training and capabilities, and the retarding influence of such a mistake would be avoided. Again, the professional judgment of the teacher is often in immediate conflict with psychological tests, and the result of such a test, showing an apparently dull child to be well above the normal for his years, is met with a haughty disbelief, and no attempt is made to adjust the child in a class more suited to his intellectual development.

(2) The writer enlarges upon the importance of mental hygiene during childhood and adolescence, and regards college students as being peculiarly exposed to the radical adjustments to environment of that period of life. A greater number than is generally supposed develop true psychoses, many more acquire incapacitating neuroses, and others do not attain the utmost degree of proficiency. The histories of several cases which came under the writer's personal observation are given to illustrate preventable psychotic symptoms whose elimination would have benefited not only the individual, but the community at large.

In order to introduce mental hygiene in a practicable form into the higher institutions of learning, it is suggested that there should be established in every university a well-equipped students' health service, including a specially trained neuro-psychiatrist. Every student should here be thoroughly examined on admission and subsequently every year, and should be encouraged to seek advice when feeling at variance with his environment. Instruction in the elementary principles of mental hygiene would facilitate the early recognition of evidences of failure to acquire habits of behaviour necessary for proper social adjustment, and the instructor could be in close contact with the class and social life of the institution.

(3) Granted there is a need for instruction in mental hygiene among college students, the question arises as to where such instruction and guidance is best obtained. The writer suggests that part of the ordinary course in psychology should be devoted to this purpose, and justifies the innovation on the grounds that learning of practical value in after life would be obtained from such instruction. A consensus of opinion taken from a class of seventy students who attended such a course indicated that they were eager for

instruction in mental hygiene, especially as it affected them personally, and considered it to be of far greater practical value than any other branch of psychology. A. WILSON.

2. Neurology.

Three Cases of a Clinical Complex: The Cerebello-Parkinsonian Association [Trois cas d'un Complexe Clinique: L'Association Cérébello-Parkinsonienne]. (L'Encéphale, June, 1923.) Vullien and Nayrac.

Cerebellar signs are not infrequently found in association with hypotonic extrapyramidal syndromes. In the cases under review, however, they were complicated by a hypertonic type.

In Case 1, a man, æt. 45, the symptoms dated from shell-concussion eight years previously. In standing he leaned heavily on a stick, with arms and knees bent, head buried in shoulders, and face a blank—an attitude of general rigidity broken only by slight involuntary muscular twitching. Voluntary movement showed gross dysmetria with tremor. The gait was spastic-ataxic, and fatigue set in rapidly.

In Case 2 also, a man, æt. 32, the affection arose after shell-concussion seven years before. Examined in bed, he lay stiff and expressionless. Supported, he could take a few steps, but with reeling and spasticity, while such voluntary movements as were possible showed much ataxy with intention tremor.

Case 3 came under observation for general paralysis of the insane in a man, æt. 50, and presented a classical picture of that disease complicated by a cerebello-Parkinsonian syndrome for which he had been treated at the Bicêtre thirty years earlier. He stood in an attitude of slight general flexion, with rigidity less pronounced than in Cases 1 and 2, and with the typical tremor of paralysis agitans. He walked fairly well, but with a wide base and stiffly. Voluntary movements showed dysmetria. The early history of this patient was not accurately known, but the presence of scarring gave evidence of numerous old cranial injuries, one of which had resulted in loss of the left eye.

The causal lesion of the syndrome described is difficult to ascertain. We may suspect it to be in the locus niger, which is known to influence the control of muscular tone, and to involve the adjacent fibres of the superior cerebellar peduncle on their way to the red nucleus. The exact nature of the change is unknown; it does not appear to be referable to any of the usual types of lesion met with in the nervous centres. C. H. FENNELL.

3. Clinical Psychiatry.

The Non-Specificity of Mental Disease. (Mental Hygiene, April, 1923.) Strecher, E. A.

Psychiatry owes a great debt of gratitude to those who have endeavoured to explain the origin and phenomena of mental disease

in focal infection, endocrine organs, the exploration of the unconscious, the cravings of the autonomic apparatus and other theories and ingenious modes of reasoning. But the sincere enthusiasm of devoted disciples tends to a singleness of purpose which detracts from the scientific worth of the massed results. Correlation between the various findings seems necessary to arrive at a true conception of the ætiological factors, and a final analysis may show a multiplicity of causes of mental disease—a non-specific ætiology.

In general medicine the pathological conditions which can be described as specific reactions are very limited, and even in such diseases as tuberculosis, syphilis, typhoid and malaria the unconditioned specificity of causation cannot be granted. The processes which lead to the development of any morbid condition are immensely complicated, and disease is almost always a culmination of a long series of detrimental or destructive conditions which eventually become sufficiently strong to break down the barriers of natural and acquired resistance. So, too, with mental disease, and the study of its causation should be approached from many angles. Of particular importance is the chronological order and times of occurrence of the various stresses and strains which assist in the final breakdown.

Brief histories of fifteen cases are given in which heredity, personality, somatic and psychogenetic factors are brought into the field of inquiry. In any particular case one of these factors predominates, but the others have some bearing and should not be lost sight of, and a check placed on the tendency to regard every hypothesis as an incontrovertible fact.

A non-specific conception entails the most advantageous therapy in the present state of our knowledge, for pathological and psychotherapeutic measures do not exclude each other. Once we know, if only approximately, the various conditions on which a psychosis is based, we may be able to exclude some factors, sufficient to allow the patient's resistance to cope with the remainder and restore him to mental balance.

A. WILSON.

The Ætiology and Clinical Characters of Certain Fugues [Sur l'étiologie et les caractères Cliniques de Certaines Fugues]. (Ann. Méd. Psych., November, 1923.) Dupouy, R., and Schiff, P.

In certain cases of fugue the ætiology is easy to ascertain, as in hypomania, alcoholic confusion, uræmia, etc. In other cases the diagnosis is more difficult. The authors describe four cases and point out certain symptoms common to them all. They lay stress upon the fact that there is a great degree of individual emotion, the patients showing irritability of a vago-sympathetic kind. Thus in all these were vasomotor and secretory reactions, weeping, blushing, dermatographism, cold extremities, goose-skin. There was a marked oculo-cardiac reflex and intense reaction to drugs. It is in such people who feel intensely all the emotions of ordinary life that fugues occur; they cannot use their reason or will to overcome affective impulses. There is a sudden supremacy of an emotional

state. There are divers reasons, such as diminution of psychic resistance by depression, exasperation by a sense of inferiority, or acute crises of anxiety, doubt or discontent. In all cases a period appears where the profound tendencies of the invalid get the better of such superficial ideas as education has inculcated. It is following such an invasion of the conscious by the unconscious that fugues occur. It is as manifestations of the unconscious that fugues should be regarded, and this whether amnesic or not, or conscious or not. Whether or not the affair is conscious once the fugue begins the actual motive remains unknown to the subject. Fugueur's never have complete memory. There is always some obfuscation, some fogging of consciousness in the beginning; in all there is some automatism. Why certain individuals have fugues while others, equally debilitated, psycho-asthenic and affected by the same difficulties have not, is because in the former there is a particular constitutional element. There are many ways of flight from the everyday life. The hysteric reacts by flight into illness, the schizophrenic by flight into an imaginary world of his own. These are purely mental flights, motionless so to speak. Others make their flight in walking; their mental flight is a motor flight. Why should their unconscious reveal itself thus and not under any other form but ambulatory automatism? It is because of the constitutional element. There may be a hereditary tendency: such people have adventurous ancestors, nomads to whom a change of country was essential.

Clinically there were two great classes of fugues, the repulsive and the propulsive. The repulsive fugues are impulsions more or less irresistible and conscious where the emotion tries to shun the place where it occurred, as in alcoholics, the anxious, the confused and the persecuted melancholic. The propulsive fugues are those which proceed to a peace determined by a mental upset, imperative hallucinations, or hypomania. The two motives may exist in the same subject, but the presence of a propulsive fugue to a definite goal is a response occurring in those to whom the fugue is an ordinary instinctive act.

A point of importance is what is the degree of irresistibility of the fugue? A fugue is the result of two factors—the power of the driving force (hallucination, emotional shock, anxiety), and the diminution of the psychic control (drunkenness, organic dementia, senile dementia, mental defect, constitutional instability). These two factors vary inversely. Thus clinically also one is obliged to adopt the idea of constitution. Alcohol acts in a double sense, exalting the latent impulsiveness and lessening the voluntary control. The consciousness of the fugue varies from the total unconsciousness of the dement up to the almost entire consciousness of the capricious unstable person.

There is always a more or less definite and passing phase of obfuscation. That is why the conscious factor cannot characterize a fugue, and in particular cannot differentiate between the two great clinical types that the authors term the psychasthenic fugue and the ambulatory automatism claimed by some to be epileptic.

The fugue of the psychasthenic is seen in emotional subjects. Easily impressed and upset, scrupulous, obsessed, having phobias, showing easy fatigability of mind and muscle, these subjects are dominated by their emotions, and the anxiety which is born in them by a traumatic or emotional shock incites them to flee. On the other hand, alcohol, which they take to "buck themselves up," causes certain hidden, subconscious desires to emerge, notably sexual ones, and the fugue which is primarily a defence reaction becomes secondarily a pursuit or an aggression. These psychasthenics frequently complain of headaches of various kinds, especially in the morning or after meals, and this is due to gastric and intestinal atony, and is not to be confounded with epilepsy. The emotion and alcohol together cause amnesia, and the fugue they cause will be partly amnesic, thus again risking being confounded with epilepsy. If the anxiety be great or the alcoholism has proceeded to drunkenness, the unconsciousness may be almost total and the state like that of confusional automatism. During the war such fugues were common, and were accompanied by almost total amnesia, sexual attacks and murderous aggressions.

As for the ambulatory automatism, the authors state that there is no proof of this being epilepsy, and they have never observed such states in epileptics, of whom they have had many cases. The real epileptic during a fugue is disorientated, disorderly in appearance, restless, perhaps terrified; he runs, he falls, he soils himself, he satisfies his wants anyhow and anywhere. He responds to questions with difficulty, or capriciously or unintelligibly.

He is excited, gesticulates, and is often hallucinated. Psychic epilepsy terminates in sleep analogous to the coma which follows a fit.

The great fugue, on the other hand, is quite different. Here the patient is composed, quiet, orderly. He does not show the agitation, precipitation, or anxiety of the confused and hallucinated. He appears to live a dream. His responses are easy to obtain and appropriate. He acts, walks, and satisfies his daily wants without attracting attention. These patients dress, move, take their food, urinate, and lie down automatically, but correctly, showing no particularly intense emotion. They do not show the tendency to sleep as epileptics do. They resemble more the sleeper than the anxious person. Hence the authors conclude that they are related to somnambulists. Some show a family history of this disorder. The ambulatory automatism of these persons is not epileptic, but is a *vigilambulism* analogous to somnambulism, and closely allied to, if not a form of hysteria.

W. J. A. ERSKINE.

4. Sociology.

Observations on Exhibitionism. (*Lancet*, August 23, 1924.) East, W. Norwood, M.D.

In this paper Dr. East points out the importance of sexual offences, not only as regards the offender, but also on account of the results which may accrue to the victim of the offence. The

composite character of the sexual instinct is dealt with. Many sexual offences are related to the imperfect and irregular development of this instinct. For practical purposes cases of exhibitionism may be divided into two main groups—the psychopathic and the depraved. The two conditions may be combined in the same individual. The depraved group may be further subdivided into three classes—those in which the exposure is a preliminary to an attempt at carnal knowledge, those in which it is an attempt to debauch children to commit a masturbatory act upon the exhibitionist, and those in which it is an attempt to attract, excite or invite a female.

The paper is more immediately based upon the results obtained by the investigation of a series of 150 recent cases. Of these cases 49 were classed as depraved and 101 as psychopathic. Among the latter there were 7 cases of psychoses, 7 of undeveloped psychoses, 24 mental defectives, 9 subnormals, and 5 cases of psychoneuroses. The number of this last subdivision is smaller than might, perhaps, have been expected. There were also 40 visionary cases—those who derive sex gratification from the exposure and the accompanying fantasy. The exposure seems to act as a bridge connecting fantasy and reality. No case of epilepsy occurred in the series.

The large proportion of mental abnormality discovered among these offenders should cause every case of sexual crime to be suspect until it has been examined by an expert. Courts of law are now gradually remanding more of these cases for investigation.

Dr. East regards the pure depraved case as being best treated by a sentence of imprisonment. And he also recommends this course for the visionary cases, as they are thus frequently made to appreciate the value of reality.

There were only 9 cases of alcoholics, this being probably due to the lessened consumption of alcoholic liquors, as compared with pre-war times.

M. HAMBLIN SMITH.

Part IV.—Notes and News.

MEDICO-PSYCHOLOGICAL ASSOCIATION OF GREAT BRITAIN AND IRELAND.

THE EIGHTY-THIRD ANNUAL MEETING of the Association was held on Wednesday, Thursday, Friday, and Saturday, July 2 to 5, 1924, at the Medical Institute, and Queen's University, Belfast, under the presidency in the earlier proceedings of Lt.-Col. EDWIN GOODALL, M.D., F.R.C.P., and later that of M. J. NOLAN, Esq., L.R.C.P.&S.Irel.

The Council and the various committees assembled on the previous day.

MORNING SESSION.—WEDNESDAY, JULY 2.

At Queen's University, Belfast.

Lt.-Col. EDWIN GOODALL, President, in the chair.

MINUTES.

The minutes of the eighty-second annual meeting, held in London, having appeared in the Journal were taken as read, and were confirmed and signed by the President.

ELECTION OF OFFICERS OF THE ASSOCIATION.

The PRESIDENT proposed that the officers of the Association for 1924-25 be :

President.—M. J. Nolan, L.R.C.P.&S.Irel.

President-Elect.—Sir Frederick Mott, *K.B.E.*, LL.D.Edin., M.D., F.R.C.P., F.R.S.

Ex-President.—Edwin Goodall, *C.B.E.*, M.D., B.S., F.R.C.P.

Treasurer.—James Chambers, M.A., M.D., R.U.I.

Editors of Journal.—J. R. Lord, *C.B.E.*, M.B., H. Devine, *O.B.E.*, M.D., F.R.C.P., G. Douglas McRae, M.D., F.R.C.P.Edin.

General Secretary.—R. Worth, *O.B.E.*, M.B.

Registrar.—Daniel F. Rambaut, M.A., M.D., B.S.

This was agreed to.

He next proposed that the nominated Members of the Council be—Drs. G. M. Robertson, Hamilton C. Marr, C. Hubert Bond, J. N. G. Nolan, Thomas Beaton, Henry B. Leech.

This was agreed to.

ELECTION OF HONORARY AND CORRESPONDING MEMBERS.

On the proposition of the President the following gentlemen, whose names had been approved of by the Council, were elected Honorary and Corresponding Members of the Association :

Honorary Members.

LORD SANDHURST, Lord Chancellor's Visitor-in-Lunacy.

Proposed by Drs. Chambers, Robertson, Cole, Collins, McRae and Menzies.

WILLIAM McDUGALL, Esq., F.R.S., Professor of Psychology in Harvard University.

Proposed by Drs. Edwards, Leeper, Tighe, Buchanan, Nolan and Ross. W. R. DAWSON, Esq., *O.B.E.*, M.B., F.R.C.P.Irel., Chief Medical Officer, Ministry of Home Affairs, North Ireland.

Proposed by Drs. Chambers, Collins, McRae, Nolan, Leeper, and Menzies.

Corresponding Members.

Dr. H. COTTON, New Jersey State Hospital, U.S.A.

Dr. C. WINKLER, Professor of Psychiatry and Neurology, Utrecht University, Holland.

APPOINTMENT OF AUDITORS.

C. F. D. McDowall, M.D., and C. M. Tuke, M.R.C.S., were re-appointed Auditors for the current year.

APPOINTMENT OF COMMITTEES.

The following Committees were re-appointed: the Parliamentary Committee with the addition of Dr. W. D. Chambers and Dr. E. F. Shaw; the Educational Committee with the addition of Dr. G. W. B. James, Dr. E. Mapother, Dr. T. Beaton, Prof. G. M. Robertson, Dr. J. H. McDonald and Dr. A. N. Boycott; the Library Committee; the Committee on Post-Graduate Teaching and Diploma in Psychological Medicine.

REPORT OF THE COUNCIL.

The GENERAL SECRETARY (Dr. R. WORTH) read this Report :

The number of members—ordinary, honorary, and corresponding—as shown in the list of names published in the *Journal of Mental Science* for January, 1924, was 743, as compared with 716 in 1923.

Number of new members elected in 1923	.	.	.	.	50
Number of members restored in 1923	.	.	.	.	2
Removed according to Bye-law 17	.	.	.	.	2
Number of members resigned in 1923	.	.	.	.	17
Number of deaths in 1923	.	.	.	.	10
Transferred to Hon. Members	.	.	.	.	0

Members.	1914.	1915.	1916.	1917.	1918.	1919.	1920.	1921.	1922.	1923.
Ordinary . .	679	644	632	627	626	626	640	631	676	699
Honorary . .	34	34	32	33	32	26	24	25	27	30
Corresponding .	18	18	18	18	17	9	9	10	13	14
Total . .	731	696	682	678	675	661	673	666	716	743

Since the last annual meeting, quarterly meetings have been held in London in November, February, and May.

At the meeting held in July last year a small committee, consisting of Drs. Cole, Collins, Brooks Keith and Worth was appointed to represent the Medico-Psychological Association at a Conference consisting of representatives of the M.P.A., Clerks and Stewards' Association, National Asylum Workers' Union, Clerk to the Mental Hospitals' Committee of the L.C.C., Clerk to the M.A.B., and representatives of the Mental Hospitals' Association, to consider and report on suggested amendments to the Asylums Officers' Superannuation Act. This has so far progressed that the members of the Conference will shortly be reporting to the individual associations.

At the meeting in November, Prof. Winckler, of the Psychiatric Neurologic Clinic, Utrecht, delivered an address on "Psychiatrical and Neurological Teaching at the Dutch Universities, especially at the University of Utrecht."

A sub-committee was formed consisting of Lt.-Col. Goodall, Prof. G. M. Robertson, Lt.-Col. Lord, Drs. Soutar, Collins and Worth, to confer with the General Nursing Council in regard to their policy.

At the February meeting the recommendations of the General Nursing Council were read. These were:

1. That the General Nursing Council invite the M.P.A. to form an Advisory Committee to assist the General Nursing Council, such Advisory Committee to meet the Mental Nursing Committee of the General Nursing Council for the purposes of matters appertaining to the Final Examinations, the resolutions of such meetings to be recommendations to the Council.
2. That the General Nursing Council invite the Medico-Psychological Association to nominate the Examiners for the Final Examinations, for appointment by the General Nursing Council.

In February the sad deaths of Dr. Alfred Miller and Dr. Clarke, of Toronto, were reported.

At this meeting the question arose as to whether the Association should become a chartered body. This was unanimously agreed to, and all expenses incurred thereby were sanctioned.

The following members were appointed to form an Advisory Committee to the General Nursing Council: Drs. R. Langdon-Down, M. A. Collins, Lt.-Col. Lord, Drs. Daniel, Boycott, Petrie, Chambers and Worth.

At the February meeting Dr. John Warnock read a paper entitled "Twenty-eight Years' Lunacy Experience in Egypt."

At the May meeting the fifth Maudsley Lecture, entitled "Some Sociological Considerations bearing upon the Occurrence, Prevention, and Treatment of Mental Disorders," was delivered at the Royal Society of Medicine by Dr. John Carswell.

At this meeting the question of forming Over-seas Divisions was discussed. The matter is still in the hands of a Sub-Committee, who hope to report progress next year.

Owing to a Royal Commission having been appointed to inquire into the Lunacy Laws, a notice has been sent round to all Superintendents and Members of the Association, asking them if they have any views on the subject, to forward them to the General Secretary.

R. WORTH, *Hon. General Secretary.*

The PRESIDENT: I beg to move the adoption of that Report.
The Report was adopted.

THE MEDICO-PSYCHOLOGICAL ASSOCIATION.—For the Year 1923.

REVENUE ACCOUNT—January 1st to December 31st, 1923.

1922.		Dr.		Expenditure.		Income.		Cr.		1922.	
£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
667	13	1	To Journal—Printing, Publishing, Engraving, Advertising, and Postage	...	899	6	10	...	...	...	...
1137	17	0	Examinations, Association Prizes, and Clerical Assistance to Registrar	...	1243	5	2	...	...	...	...
18	8	1	Petty Disbursements, Stationery, Postages, etc.	...	21	2	9	...	...	...	...
226	16	4	Annual, General, and Divisional Meetings	...	267	5	3	...	...	...	...
116	4	0	Rent of Premises at 11, Chandos Street, care of Office	...	116	4	0	...	...	...	...
10	10	0	Audit and Clerical Assistance	...	10	10	0	...	...	...	...
87	5	11	Miscellaneous Account	...	213	11	0	...	...	...	...
1108	0	10	Balance	...	...	...	...	...	...	...	...
3492	15	3							2771	5	0
									1283	4	5
									£4054	9	5

BALANCE-SHEET—31st December, 1923.

1922.			Liabilities.			Assets.			1922.		
£	s.	d.	£	s.	d.	£	s.	d.	£	s.	d.
230	0	3	To Journal Account, balance of	...	...	...	...	...	...	...	...
2	7	6	Examinations Account, balance of	...	...	...	...	...	...	...	...
0	18	0	Petty Disbursements Account, balance of	...	...	...	...	...	...	...	...
47	18	4	Meetings Account, balance of	...	...	...	...	...	...	...	...
29	1	0	Rent Account	...	...	...	...	...	...	...	...
—	—	—	Fees Account	...	...	...	...	...	...	...	...
33	0	2	Miscellaneous Account, balance of	...	...	...	...	...	...	...	...
214	3	9	Gaskell Account	...	...	...	...	...	...	...	...
113	2	8	Income Tax	...	...	...	...	...	...	...	...
—	—	—	Dividends	...	...	...	...	...	...	...	...
48	3	0	Income Tax	...	...	...	...	...	...	...	...
718	14	8	Asylum Workers' Convalescent Fund	...	...	...	...	...	...	...	...
3038	12	4	Balance as at 1st January, 1923	...	...	...	...	...	...	...	...
1108	0	10	Add Balance as per Revenue Account	...	...	...	...	...	...	...	...
351	2	9	Increase in Valuation of Investments	...	...	...	...	...	...	...	...
5487	15	11				...	...	...	...	...	...
40	19	9				...	...	...	...	...	...
5440	16	2				...	...	...	...	...	...
£6159	10	10				...	...	...	...	...	...
			Deduct:								
			Subscriptions written off								
			Investment redeemed (received 29/2/24)								
			...								
			34 10 10								
			190 9 9								
			6504 14 7								
			£7908 16 0								

(Signed) JAMES CHAMBERS, Hon. Treasurer.
(Signed) DUJARDIN, BOLT & Co.

COLIN McDOWALL
C. MOLESWORTH TUKE } Hon. Auditors.

MAUDSLEY BEQUEST.

1923.	Dr.	Expenditure.	£	s.	d.	1923.	Income.	£	s.	d.
May 25.	To Cash—Lecturer's Honorarium		78	15	0	Jan. 1.	By Balances	...	...	...
June 25.	" " Expenses of Meeting...		2	15	0	June 1.	" Dividend, War Loan, 5 per cent.	...	...	...
Dec. 31.	" Balance Income Tax owing		23	15	0	Dec. 1.	" "	...	...	...
"	" Dividends		113	10	4			...	...	...
			137	5	4			...	...	...
			£218	15	4			£218	15	4

GASKELL FUND.

Dr.	Expenditure.	Income.	Cr.
1923.		1923.	
Oct. 3. To Cash—Gold Medal	£ s. d. 6 0 0	Jan. 1. By Balance—	£ s. d. 214 3 9
" 11. " Prizes awarded	75 0 0	" Dividend, New Zealand, 3½ per cent.	18 2 5
" " Examiners' Fees	4 4 0	Apr. 3. " New South Wales, 3 per cent.	3 16 0
Dec. 31. " Balance Income Tax		June 1. " War Loan, 5 per cent.	9 5 0
owing ...	4 3 0	July 2. " New Zealand, 3½ per cent....	18 14 6
Dividends ...	187 18 2	Oct. 1. " New South Wales, 3 per cent.	3 18 6
	<hr/>	Dec. 1. " War Loan, 5 per cent.	9 5 0
	192 1 2		<hr/>
	<hr/>		<hr/>
	£277 5 2		£277 5 2

REPORT OF THE TREASURER.

The Hon. TREASURER (Dr. J. CHAMBERS) read this Report :

I beg to submit the Revenue Account and Balance-Sheet of this Association for the past year, also a Statement of the Income and Expenditure of the Gaskell Fund and the Maudsley Bequest.

There is a substantial credit balance in all those accounts.

Several changes have been made in the Assets of the Association :

The holding in Victoria Government $3\frac{1}{2}$ per cent. Stock was redeemed.

The Midland Railway $2\frac{1}{2}$ per cent. Preference was converted into London Midland & Scottish Railway 4 per cent. Preference, and a sum of £2,500 was invested in Conversion Loan $3\frac{1}{2}$ per cent. J. CHAMBERS, *Hon. Treasurer.*

The Report was adopted.

REPORT OF THE EDITORS.

The PRESIDENT : Owing to Col. Lord's unfortunate illness the Report from the Editors has not yet reached us.

REPORT OF THE AUDITORS.

The GENERAL SECRETARY read this Report, which was agreed to :

We, the undersigned, having examined the Treasurer's books, and having duly compared and scrutinized receipts and vouchers, hereby certify that the Accounts and Balance-Sheet, as set forth, represent a true statement of the Medico-Psychological Association's finances for the year 1923.

COLIN McDOWALL.

C. MOLESWORTH TUKE. } *Hon. Auditors.*

REPORT OF THE EDUCATIONAL COMMITTEE.

Dr. A. W. DANIEL read this Report :

The Educational Committee beg to submit the following Report for the year ending July 2, 1924.

Four meetings have been held during the past twelve months.

The intermediate examination having been abolished, the fees were returned to the candidates.

The new regulations providing for the co-operation of examiners of the Nursing profession will come into force for the Final Examination to be held in May, 1925.

A sub-committee has been appointed to consider and report on the Syllabus and Regulations governing the Gaskell Prize.

An Advisory Committee has been appointed to consider and prepare a report on the question of institutions recognized for the training of mental nurses and of those nursing mental defectives.

One case of collusion at the Preliminary Examination was dealt with during the year.

It having been reported that at one institution the November written examinations were held at 2 p.m., contrary to regulations, this examination was annulled, and it was resolved that in future the written examinations must take place between the hours of 9 a.m. and mid-day.

The number of candidates who presented themselves for examination during the year are as follows: Preliminary, 3,471; Final, 2,641. In the previous year the figures were: Preliminary, 3,589; Final, 2,624, being in the case of the preliminary a decrease of 118, and in the case of the final an increase of 17.

On account of the Annual Meeting taking place at an unusually early date, the results of the examination for the certificate in Psychological Medicine, Gaskell Prize and Prize Dissertation cannot be announced.

At the meeting on July 1, 1924, Prof. Robertson moved that "The Medico-Psychological Association, in accordance with the original agreement with the General Nursing Council, is prepared to nominate the 4 examiners for the final written examination, and the 32 doctors to act as examiners for the oral and practical part of the same examination, the Association leaving the appointment of the 32 members of the nursing profession required as examiners for this examination to the General Nursing Council."

Prof. Robertson also moved the following resolution: "That the Medico-Psychological Association approves the recommendation of the Scottish Division to accept the Preliminary Examination of the General Nursing Council, by Scotland, as an alternative to their own Preliminary Examination."

This was carried by 8 votes to 5, and was afterwards unanimously agreed to by the Council.

It was moved by Dr. T. C. Mackenzie, seconded by Dr. Douglas McRae, and unanimously agreed to by the Educational Committee, and afterwards by the Council: That the Educational Committee does not authorize the Scottish Division to accept the proposal of the General Nursing Council to abolish the Preliminary Examination of the Medico-Psychological Association in Scotland.

J. KEAY, *Chairman*.

A. W. DANIEL, *Secretary*.

Dr. A. W. DANIEL: I beg to move the adoption of the Report.

The PRESIDENT: I think this Report should be considered in sections.

(a) "At the meeting on July 1, 1924, Prof. Robertson moved that 'The Medico-Psychological Association, in accordance with the original agreement with the General Nursing Council, is prepared to nominate the 4 examiners for the final written examination and the 32 doctors to act as examiners for the oral and practical part of the same examination, the Association leaving the appointment of the 32 members of the nursing profession required as examiners for this examination to the General Nursing Council.'"

That is the first one. It is for you to express your views.

Dr. W. F. MENZIES: The wording of the last clause is still ambiguous. Those appointments left to the Nursing Council should be distinctly stated as for the oral and practical portion of this examination, because there is one woman included in the four at the beginning of the resolution.

Dr. BEDFORD PIERCE: The four examiners appointed were to consist of three medical men and one registered nurse.

The PRESIDENT: Are those four only concerned with the assessing of papers in London, or what do they do?

Dr. BEDFORD PIERCE: They set the papers and assess them.

Dr. C. HUBERT BOND: They form the Examination Board.

The PRESIDENT: And you suggested?

Dr. BEDFORD PIERCE: Three medical practitioners and one registered mental nurse.

Dr. MENZIES: That is the regulation.

The PRESIDENT: It is suggested that the wording be modified to read, "32 registered nurses for the oral and practical portion of the examination." What is your view upon that subject, gentlemen?

Agreed.

The PRESIDENT: Dr. Bedford Pierce suggests that of the four examiners three be medical men, and one be a registered mental nurse. What about that proposition?

Agreed.

ANOTHER MEMBER: It occurs to me that if we only nominate four examiners something might happen to one of these four examiners when the time comes round, in which case, would they come back to us to nominate a substitute, or would it not be wiser to nominate a larger number than four, so that we can select from them in the event of one or more being unable to come?

The PRESIDENT: I think that was gone into yesterday, and we thought we had better adhere to the four. Is that your view, gentlemen?

Agreed.

(b) "Prof. Robertson also moved the following resolution: 'That the Medico-Psychological Association approves the recommendation of the Scottish Division to accept the preliminary examination of the General Nursing Council, by Scotland, as an alternative to their own Preliminary Examination.'"

The PRESIDENT: The Scottish Nursing Council Preliminary is to be an alternative to the Medico-Psychological Association's Preliminary. The nurses will go in for the final of the Medico-Psychological Association on that, but that gives them the advantage of going up for the State examination thereafter, being available for it. That is the point, I think. As to what England may

do thereafter is uncertain. As to what Ireland may do, that is possibly even more uncertain. (Laughter.) Has any gentleman any observations to make on that section? It is an important point that will really commit the Association.

Dr. H. YELLOWLEES: I was going to ask whether it was advisable at this stage, before further resolutions are passed, that some statement be made with reference to the Association's policy regarding the future of its own examination? It seems to me a mistake to discuss what will be done with regard to the Nursing Council's examination until the Council have come to some conclusion as to what is going to happen with regard to our own examination.

The PRESIDENT: I think that is in the hands of the individual members of the Association. Our examinations have not been abolished. It is open to any centre to carry on with its examinations, and no doubt the majority will for the present. Others have gone in bodily for the State system of examination. The two can be run concurrently. Where the State examination is held *in toto*—as, for instance, at Cardiff—we can still run our examination as an Honours examination. There is no compulsion, and there is no recognized policy, as far as I know.

Prof. G. M. ROBERTSON: Dr. Yellowlees asked what the policy of the Association was with regard to this matter, which has been discussed by the Association on more than one occasion. It was first of all discussed at the Newcastle meeting two years ago, and the Association then decided it would carry on its examinations in the future as it had done in the past. There is absolutely no change with regard to the policy of the Association. (Applause.)

Dr. YELLOWLEES: I take it, Mr. Chairman, your concluding words, that there was no settled policy of the Association, were in error?

The PRESIDENT: If by a policy you mean something that is impressed upon a body and accepted by all concerned, and laid down like the laws of the Medes and Persians, then I can hardly agree that is the position with us, because, as you see, in my own case, and in the case of many others, we have departed from that. I certainly take the view myself that whatever the common opinion might be, or at any rate the opinion of the majority, it is left to individuals to pursue what course they please with regard to this matter—either to go in for the State examinations *in toto*, or to keep to the Association's only, or to go in for the State and have the Association's for an Honours examination. You are not bound by the Association. Otherwise I myself am not carrying out its policy.

Dr. J. G. SOUTAR: With all due deference to what you have said now, I think it is undoubtedly the case that the policy of the Association, as far as it can be expressed either by general meeting or council meeting, is that we are to continue our own examination. That does not in any way affect the conduct of any individual member. If he prefers that his nurses should go in for the State examination, and they wish to do so, then by all means let them, but it is open to them to go in for what we provide for them—our examination and our diploma. I think that is undoubtedly the policy of the Association, and is to be distinguished from the policy of individual members of the Association. (Hear, hear.)

The PRESIDENT: Of course, if the individual members in time adopt the plan which I and others have adopted, the policy of the Association will gradually alter.

REPORT OF THE REGISTRAR.

The GENERAL SECRETARY: The duties of the Registrar have been carried out by Dr. H. B. Leech, of the Warwick County Hospital, Hatton, until the appointment of Dr. D. F. Rambaut. Dr. Leech has written me a letter stating that he cannot prepare an ordinary Report, but he makes mention of this, that there are three entries for the professional examination to be held on the first Monday in July and one essay for the Prize Dissertation, and one for the Gaskell Prize.

REPORT OF THE PARLIAMENTARY COMMITTEE.

Dr. W. M. BUCHANAN read this Report and moved its adoption:

The Committee has met four times during the year.

Its activities have been much concerned with the Mental Treatment Bill;

but unfortunately the progress of this Bill through Parliament has been seriously interrupted by the disturbed state of political affairs throughout the country, and by the repeated changes of Government which have taken place. The Committee has, nevertheless, lost no opportunity to urge for the re-introduction of the Bill, and letters have been addressed to each new Minister of Health as he appeared in office, impressing upon him the importance of the Bill, and pointing out how seriously the absence of facilities provided by it hampers the treatment of incipient mental disorders. Letters have been sent to the medical superintendents of all mental hospitals in England and Wales asking them to bring the subject before their Committees with a view to passing a resolution to be sent to the Minister of Health, urging upon him the necessity of the Bill. The County Councils' Association and the Mental Hospitals' Association have also been approached with a view to soliciting their assistance in the passage of the Bill. A circular letter has also been addressed to each member of Parliament emphasizing the advantages of the Bill, and urgently requesting him to support the Government in passing it.

The Committee has continued to press for amendments to the Asylums Officers' Superannuation Act, 1909, and has appointed delegates to attend a Conference on this subject with representatives of the National Asylum Workers Union, the Clerks and Stewards' Association, and the Mental Hospitals' Association. This conference has met on six occasions, and having completed an exhaustive consideration of the Act, it has agreed to certain important amendments which have been submitted to Parliamentary Counsel, with a view to having them drafted in the form of an amending Bill, which it is hoped will be before the Committee at an early date.

The Lunacy Act, 1890, has been considered by the Committee, and a recommendation has been sent to the Council that in view of a Royal Commission having been set up to consider the Act, a sub-committee be appointed to at once prepare and arrange for giving the evidence that should be submitted by the Association.

R. H. COLE, *Chairman*.

W. BROOKS KEITH, *Secretary*.

The Report was adopted.

Dr. BUCHANAN moved that the members of the Committee suggested should be Drs. R. H. Cole, Brooks Keith, C. Hubert Bond, J. G. Soutar, F. W. Menzies, Bedford Pierce, R. Worth, J. Chambers, P. T. Hughes, Rothesay C. Stewart, E. Goodall, and Dr. H. Wolseley Lewis or Dr. M. A. Collins.

Dr. C. H. BOND: I second that, and suggest the addition of the name of Sir Frederick Mott.

Agreed.

Dr. BUCHANAN: I think the important point about this matter is that the Association has already authorized the appointment of a sub-committee to get the views of members as to the respects in which the Lunacy Acts require amendment, and the Parliamentary Committee is now asking that the terms of reference of that sub-committee be extended to actually decide what the evidence to be given by the Association is to be, and who is to give it.

REPORT OF THE LIBRARY COMMITTEE.

The GENERAL SECRETARY read this Report and moved its adoption.

The Library has been used perhaps rather more during the past year. The facilities for borrowing books remain as before.

The money granted by the Council has been expended, and the new books purchased have been mentioned in paragraphs which have appeared from time to time in the *Journal of Mental Science*.

An application was made from the Japanese Universities saying that in consequence of the fire there had been great destruction of libraries and books. They made a request that certain books, if in duplicate, could be furnished to them, but it has been found impracticable to make any contribution to their request on account of the fact that there are very few duplicates in our Library of the later editions.

There is one request from the Library Committee—the usual request for a grant of £20 for renewing and buying books.

Dr. C. H. BOND: May I make a suggestion, in case that Report gets rather buried in the small print of the Journal and is overlooked. Might it be possible, when the Agenda is going round, for the General Secretary to include with that a reminder about this request from the University of Tokio, because among the large number of our members there must be many who have quite a number of books—I do not say that they would be pleased to get rid of, but at least that they would be willing to get rid of, which would be very valuable, I believe, to the Tokio University. I suggest further that if something of that kind went on to an agenda paper, an instruction or guidance might be given to any of us who have such books as to where to send them. For each of us to send them direct to the University would be rather awkward, but perhaps we might send them to the Secretary of the Library Committee or to the General Secretary, and then the books could be forwarded *en masse*.

A MEMBER: Arising out of that Report I wish to know if anything further has been done in the way of obtaining grants from the mental hospitals in the neighbourhood of London towards the upkeep of this Library, in order that their assistant medical officers may have facilities to make use of it.

The GENERAL SECRETARY: That was submitted to the Minister of Health as to whether it was allowable—whether the Auditors would pass the accounts if such different Committees did make a grant—and I have heard from the Minister of Health, and he is inclined to sanction it, or at least not to dispute it.

The Report was adopted.

MOTIONS INVOLVING EXPENDITURE OF FUNDS.

The PRESIDENT: We received an invitation from the French-speaking Alienists to send a representative of our Association to their Congress, which will be held in Brussels this month, and the Council has decided to leave the matter in the hands of the Secretary to make any necessary arrangements. The Council proposed that £15 be allowed our representative for his expenses.

Agreed.

A grant of £20 for the Library was sanctioned.

DATES OF THE QUARTERLY MEETINGS.

It was agreed that the Quarterly Meetings of the Association should be: Thursday, November 20, 1924; Thursday, February 19, 1925; Thursday, May 21, 1925.

MAUDSLEY LECTURES.

The Maudsley Lecture for 1925 will be given by Dr. J. Shaw Bolton.

THE GENERAL NURSING COUNCIL FOR SCOTLAND AND THE ASSOCIATION'S NURSING EXAMINATIONS.

Dr. W. M. BUCHANAN: The conditions that have been offered by the General Nursing Council for Scotland are as follows: Firstly, that the General Nursing Council for Scotland invites the Scottish Division of the Medico-Psychological Association to form an Advisory Committee to meet the Education and Examination Committee of the General Nursing Council for Scotland, for the purpose of considering matters pertaining to the Final Examination in mental nursing. Secondly, that the General Nursing Council for Scotland invites the Scottish Division of the Medico-Psychological Association to nominate examiners for the Final Examination for consideration by the General Nursing Council. Thirdly, that the Medico-Psychological Association should exempt from their Preliminary Examination nurses who have passed the preliminary examination of the Scottish General Nursing Council. This particular provision is a departure from the arrangements come to in England. It was reported to, and considered first of all by the Educational Committee, then by the Council, and it was decided that this might be accepted. But these three conditions were subject to the acceptance of a fourth condition, namely, that the Medico-Psychological Association should cease to hold a Preliminary Examination in Scotland.

This suggestion was discussed by the Educational Committee and in Council yesterday, and both the Educational Committee and the Council decided

unanimously that it could not be accepted. The Medico-Psychological Association is an imperial body and will be unwilling to discriminate against Scotland in this matter, and the condition is not related in the remotest way to any provision of the Nurses' Registration Act. The condition is unnecessary for the avoidance of duplicate examinations, because, having agreed to recognize the Preliminary Examination of the General Nursing Council as an alternative to our own Preliminary Examination, nurses would not require to take more than one Preliminary Examination for both Diplomas.

I now propose that the General Secretary should write a reply along these lines, agreeing to the first three conditions, but refusing to accept the fourth condition, and that this letter should be sent to the Registrar of the Scottish General Nursing Council, and also to the Government bodies who are interested in this matter, namely, the Scottish Office, the General Board of Control for Scotland, and the Board of Health.

This was approved of.

Dr. BEDFORD PIERCE: Might I ask one question? Supposing the Scottish Council decline to accept the conditions which we have just laid down, is the question of allowing their preliminary examination as an alternative to our Preliminary Examination also dependent on the Scottish Council agreeing to those conditions?

Prof. G. M. ROBERTSON: I think the whole offer falls completely to the ground if the Scottish Nursing Council refuses to accept it. I think it is practically certain that they will refuse, and that the matter after that will be in the hands of these Government Departments.

Dr. BEDFORD PIERCE: Then that will not exempt them from our examination?

Dr. ROBERTSON: No.

ELECTION OF CANDIDATES AS ORDINARY MEMBERS.

The President appointed Drs. R. R. Leeper and A. W. Daniel as scrutineers for the ballot.

The candidates were all elected as follows:

JOHN McINNES, M.B., Ch.B.Glas., D.P.M., Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.

Proposed by Drs. G. Clarke, J. Brander and A. Hancock.

HENRY DOUGLAS HAYES, M.B., Ch.B.Edin., D.P.M., Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.

Proposed by Drs. G. Clarke, J. Brander and A. Hancock.

DOUGLAS REID ALEXANDER, M.R.C.S., L.R.C.P.Lond., D.P.M., Assistant Medical Officer, London County Mental Hospital, Bexley, Kent.

Proposed by Drs. G. Clarke, J. Brander, and A. Hancock.

REGINALD EDWARD JENKINS, L.M.S., S.A., Assistant Medical Officer, Norfolk, County Mental Hospital, Thorpe, Norwich.

Proposed by Drs. O. G. Connell, R. Worth and G. Warwick Smith.

PAPERS.

"The Reaction of the Blood to the Ingestion of Protein in the Psychoses," by Dr. F. R. MARTIN.

The PRESIDENT: We are obliged to Dr. Martin for this careful and interesting piece of work conducted on biological lines. If any gentleman would like to criticize or offer any observations or ask any questions on this matter I should be pleased.

Sir FREDERICK MOTT: I have listened to the reading of this paper with the very greatest interest. I knew this work was going on, because Dr. Isabel Robertson has been working at this for some time past at the Maudsley Hospital, but I had not seen the results put out before, and I should like to congratulate the reader of the paper on the excellent way in which he has carried out this research. Of course I quite appreciate that Dr. Golla has a very critical mind, and that he would endeavour in every way possible to eliminate a fallacy. There is only one point about which I would like to ask, and that is whether with regard to the large percentage of general paralytics there was some bodily condition to account for it? Also I have in mind the work that has been carried on by

Dr. Graves and Dr. Pickworth with respect to chronic septic conditions arising from the teeth. It is astonishing what a number of people do suffer with this. I do not believe this is the cause of insanity, but I believe it is a cause of prolonging those mental conditions, and I should like to know whether in these cases any systematic effort has been made to see whether there is, in the cases of the positive reaction, any chronic septic condition. Perhaps Dr. Martin would tell me that.

Dr. F. R. MARTIN: The cases were all examined physically when the test was made. In every case the patients were up—in other words they were not patients confined to bed for any organic condition.

Sir FREDERICK MOTT: The people whom I refer to would be about, but might have chronic sepsis for all that.

Dr. MARTIN: In none of these cases was there any marked chronic sepsis. I will not state that there were no decayed teeth.

Sir FREDERICK MOTT: You did not have X-rays of the teeth? Because it is astonishing what a number of people who believe they are in good health are really in bad health from that cause. Dr. Pickworth has been engaged in this for some time past, and he will tell you that you will find streptococci and all manner of organisms where you would never expect it. I think if those could be eliminated it would be a valuable addition.

Dr. C. C. EASTERBROOK: I also have listened with great interest to Dr. Martin's paper, but there is one point I am not quite clear about. When he talked about leucocytosis did he refer to all the white cells in the blood or only the lymphocytes?

Dr. MARTIN: I refer to white cells generally.

Dr. EASTERBROOK: During primary digestion, of course, it has been long known to physiologists that there is lymphocytosis present. This, of course, refers only to the lymphocytes. The general upshot seems to be that in health there is a lymphocytosis that takes place during digestion, but in a number of cases it fails to take place and the failure seems to be in proportion to the degree of mental disorder, irrespective of the particular form of psychosis.

Dr. MARTIN: Yes.

Dr. EASTERBROOK: And that seems to be in harmony with other diseases, as you referred to in the history of the matter.

Dr. MARTIN: Yes.

Dr. EASTERBROOK: It is a very interesting observation, and one would like to know why the change takes place, and the explanation of the mechanism of it. We cannot get further at present than simply saying it is an impairment of the function of the vegetative nervous system?

Dr. MARTIN: No.

Dr. EASTERBROOK: It has been a very interesting paper, and it certainly helps to bring the psychoses into line with other bodily diseases, and also to emphasize the point that Dr. Martin started out with—that our minds are really largely the expression of our physical organism and also of the state of health of our systems generally.

Dr. HAMILTON C. MARR: I should like to say how pleased I was with the paper read, and particularly to approve of the lines on which Dr. Martin has proceeded. I would like to express the hope also that Dr. Martin might follow this up in earlier cases of psychoses, particularly in all those cases which we came across during the war in large numbers—those cases known as shell-shock. I noticed in many of these cases that undoubtedly there was from the very start marked metabolic disturbance, and that was specially seen on the superficial observation of the condition of the blood-vessels. No matter how unfilled the arteries were, the pulse-pressure was always greater in those cases of neurasthenia, especially where there was hysteria, and if one examined the retinal vessels one also found these congested, showing that there was a marked metabolic change in the ingestion generally throughout the system. We went further in our observations at the Victoria Hospital, in getting not only the blood tested, but the urine tested, and we found also evidence of microbic influence there. Sir Frederick Mott talked about the effect of decayed teeth, and I should like also to suggest that here is a very pregnant source for further research, particularly in those cases of French-mouth. I did not rise to make any criticism, but rather to express the hope that Dr. Martin's work would be followed up by the younger

men of the Association, and I am sure it would lead to most important results. I again express thanks to Dr. Martin for his paper.

The PRESIDENT: I should like, in conclusion, to thank Dr. Martin. Of course Sir Frederick Mott's observations are most pertinent. In all these investigations, regarding leucocytes especially, it is essential to clear up the point as to whether there are any septic conditions about, because that would materially affect any observation upon leucocytes. In order to do this it is necessary, as you know, to examine from the point of view of the radiologist, the pathologist and the bacteriologist, especially of the bacteriologist concerned with bacterial intestinal conditions and the teeth, and that only shows the need for having these gentlemen attached to every hospital. I am glad to say we have these attached where I am; they come up regularly, and the other day I had a case of a youth who came in with various vague symptoms. The Rhinologist of Cardiff Royal Infirmary, who is our Rhinologist, said he would like an X-ray of this man. We took it, and sure enough there was an obscure shadow there which he, from his experience, said was pus. He put that to the proof, because he operated upon him and removed a quantity of pus from one of his sinuses. That is only an instance, but with regard to any work connected with mental disease the necessity for physical observations is, of course, paramount, and from the point of view of the vegetative system there is enormous scope, because our ignorance on that subject is abyssmal, and any tests which help us to ascertain the state of the autonomic or vegetative nervous system are most welcome, and should this prove to be a test of the state of that system, so much the better.

There is one point I should like to draw attention to also. Of course, as you know, protein therapy has come in a good deal, and has been employed also in mental cases. The question is, What does this protein therapy depend upon? Milk has been injected largely and mainly as a means of inducing reaction by protein therapy. The other day I read an account from an American source, where it was quite clearly proved that that therapy depended upon the milk being infected: in other words, sterile milk produced no results at all. It was only when there were bacteria in the milk that there were results: in other words, it was infected milk that produced the milk protein therapy results, and I should like to know whether this milk was sterilized, or was it ordinary milk?

Now a thing of this kind might be very useful in prognoses, of course, from the point of view of seeing whether dementia præcox in a certain phase is going to alter, and it would be interesting to know whether any differentiation could be made out of the different types of dementia præcox. To my mind the catatonic types are the only characteristic types. There is more reaction found in that type than in the other vaguer types.

Lastly, I would like to tell you that where I am, we are doing a Van den Bergh bilirubin reaction on all cases coming in, and it is quite extraordinary the number of cases that respond to the indirect reaction, showing that, at any rate, is reliable, because these people have no obstruction of bile-passages or liver obstruction.

With those few remarks I thank you. Perhaps you would tell me if that milk was sterilized?

Dr. MARTIN: It was not sterilized. It was given by mouth. It was not injected.

The PRESIDENT: Then of course all those results may have been due to bacteria.

"On the Colloidal Gold Reaction with the Cerebrospinal Fluid," by Dr. THOMAS HOUSTON, *O.B.E.*

The PRESIDENT: I am exceedingly sorry to have to curtail this subject of Dr. Houston's, but in your name I beg to thank Dr. Houston and Dr. Armstrong for their very interesting communication.

(1) "The Unconscious—A Suggestion"; (2) "Short Notes on a Case of Cerebral Sanguineous Cyst with Mental Symptoms following Surgical Relief," by Dr. WILLIAM CALWELL.

The PRESIDENT: With regard to these two papers, I must leave them to my successor. I trust an occasion will be found to have them read.

A CIVIC RECEPTION.

A hearty welcome was extended to members of the Association at a Civic Reception held by the Lord Mayor of Belfast, Sir WILLIAM TURNER, at the City Hall, Belfast, followed by luncheon, at his Lordship's invitation.

TOASTS.

The LORD MAYOR: I ask you to fill your glasses to drink with me to the toast of the "President and Members of the Medico-Psychological Association of Great Britain and Ireland," our distinguished visitors to-day. I offer them most hearty congratulations on holding their Eighty-third Annual Meeting in Belfast, and in the name of the citizens I cordially welcome them on the occasion of their first visit to our city. (Hear, hear. Applause.) I hope that their visit will be both enjoyable and profitable, and that we may ere long have the pleasure of welcoming them again.

The Association is admirably represented by its popular President. (Applause.) I am referring to Col. Edwin Goodall, of Cardiff, whose splendid record of work for the increase of knowledge and for the benefit of the insane is so widely known, and whose mental hospital is one of the chief homes of scientific method as applied to the treatment of insanity. (Hear, hear.) Col. Goodall is now approaching the end of a very successful year of office as President, and he tells me that in an hour or two he will be succeeded by our good friend on my left, who is universally respected for his ability and admired for his geniality. I refer to our neighbour, Dr. Nolan, the Resident Medical Superintendent of Down District Asylum. (Applause.) I should say here I have just been discussing the question as to asylums, and it appears there is some talk of dropping that word and using the term "mental hospital."

Since Dr. Nolan came amongst us, now many years ago, he has established a fine reputation as an able administrator and an enlightened physician, and has taken a prominent part in practically every movement in this country for the benefit of the insane. On your behalf as well as my own I congratulate him on the honour conferred upon him by this Association, and I wish him a happy and prosperous year of office.

The general aims and objects of the Association are such as must commend themselves to all, and the Association has earned our deep gratitude for what it has done for the relief of much suffering.

I understand that the Association includes almost every mental specialist of note in the British Isles, and many in the Dominions overseas, and is vigorously carrying on its beneficent work.

I am informed that you intend visiting Purdysburn Villa Colony this afternoon, and there, I venture to think, you will see an institution where the committee of management, with the able advice and energetic co-operation of the late Dr. William Graham, has taken advantage of every natural feature, and of all that knowledge and ingenuity could devise, to render it second to none in these countries, and which is still in process of growth under Dr. Graham's nephew and successor, Dr. S. J. Graham. (Applause.) Councillor Wm. Macartney, the Chairman, and Dr. Graham are to be congratulated on the wonderful development of this institution, and the great success which has attended their labours.

On Friday I understand you are to visit Downpatrick Asylum, or rather I should say Mental Hospital, an institution of the older type, which has been raised to the highest degree of perfection possible to it, thanks to the wisdom of the committee and the energy and ability of Dr. Nolan and his staff.

We have here our worthy friend Col. Sharman Crawford, who has again been elected Chairman of the Down County Council, and his only complaint against Dr. Nolan and his home is that he is always asking for money, but I think the Colonel is satisfied that the money has been well spent.

I trust that your visit to these institutions will interest you greatly. Once more I offer you a very hearty welcome, and I trust that you will have a pleasant meeting. We are delighted to have you at Belfast, and I hope you will have a most enjoyable time. I now give you the toast, and I couple with it the name of your President. (Applause.)

The PRESIDENT (Lt.-Col. EDWIN GOODALL): It is indeed embarrassing to me to have to respond for our Association under these auspicious conditions

in this magnificent Hall. Our Association, as the Lord Mayor has said, has concerned itself for some eighty-three years with the care and treatment of mental disorders, and also with their prevention and with their after-care, and with the training of doctors and nurses in the treatment of those disorders. We are not confined to John Bull's major island; we have our branches all over this island, I am glad to say, and also in outlying parts of the Empire, and it is our proposal and determination to do what we can to promote imperial interests, and to bind together the members of the Anglo-Saxon and Celtic races everywhere in our line of work to the best of our ability. (Hear, hear.) For that end amongst others we are here in Belfast, for we recognize in Ulster an important asset to the Empire, and we thoroughly appreciate their loyalty and splendid spirit. Our Association meeting has not been held in Ireland for about eleven years, when we met at Dublin under the Presidency of my friend, Lt.-Col. W. R. Dawson, now the Chief Medical Officer for your Ministry of the Interior. Our visit therefore is long overdue, and above all overdue in Ulster and Belfast, where, I regret to say, we have never been before. But now we are here we feel ourselves quite at home. (Applause.) Everything here is the same as with us (as indeed we knew it would be) in the major island. We notice that the police carry certain strange utensils, which perhaps we are not familiar with, but with regard to so many things I feel especially our northern members and our Scottish members must feel themselves extremely at home here in Ulster. There are so many names above your great emporiums which are suggestive of names north of the Tweed that I cannot but think that some of our friends must feel particularly at home; and there are also the evidences of thrift and industry, energy, enterprise and rugged independence which you manifest to so high a degree.

But after all the Scottish and the northern English were merely interlopers and invaders of this country, and like other invaders they have got imbued with that Celtic effulgence and spiritualism which, as we know, exists for the purpose of sublimating the coarse Anglo-Saxon and Scot. But we are not all interlopers and invaders. Some of us can trace back to pre-natal times in these islands. Some of us in the germinal have existed here through æons of time—and a germ is a thing which nothing alters. The body of us may be altered, the environment may be altered, but we know that the germ itself is never affected from the start to the finish by any environment or influence. Therefore I say that I can trace back to a city known as Limerick. It is true I was born in Calcutta, and that on the paternal side I was perhaps Scandinavian, nevertheless my fore-mothers, shall I say, were all from that delectable town of Limerick. If you go there you will find to-day the Nashes, a family of great local repute, as Dr. Nolan will bear out; a family which has known how to keep itself respected not only amongst its friends, but amongst its enemies.

As I say, we have these associations. Now, we feel that our Association is doing the best it can in handing over the Presidency to my friend who is to succeed me. There is no one in Ireland, or for that matter in any part of the Kingdom, who is more suited to take on the Presidency with honour. Dr. Nolan has been prominent in connection with the administration of mental hospitals, and in connection with everything pertaining to the treatment of mental disorders, for long years. I think he is the Senior Superintendent in Ireland, and there is no one whom we would delight to honour more. He has received us with great hospitality. The flood of hospitality, I may say, opened last night, and exhausted us. My Lord Mayor, you have opened the flood-gate even wider, and we run the risk of being submerged in this flood.

This afternoon we hope to visit your Villa Colony at Purdysburn, regarding which we know a good deal in the abstract and theoretically. We know this is an exceptionally fine institution, and we know that it is without question the chief institution worth seeing, by a long way, in Ireland, and we hope great things from a visit to that institution.

So, my Lord Mayor, in the name of my colleagues and of this Association, it affords me very great pleasure—and peculiar pleasure as the last act nearly of my Presidency before singing my *Nunc Dimittis* or swan song—to thank you for the very gracious and kindly hospitality which you have extended to us, and the kindness and amiability with which you have received us in this great city. (Applause.)

Dr. NOLAN: After the eloquent manner in which my colleague, Dr. Goodall, has addressed you, I think it is only left for me to say how sincerely we all feel indebted to the Lord Mayor for his hospitality to the Association. The Lord Mayor, from the moment he heard of this visit, came forward in a most kindly manner and expressed his sympathetic interest in our proceedings. He has been at all times associated with everything kindly and philanthropic since he took up office, and he has particularly shown himself kindly and sympathetic in everything associated with our less fortunate brethren in lunacy hospitals, and I cannot say sufficiently what I feel with regard to him in this matter. I would simply ask you, Sir, to accept my share of these thanks, and I echo all that our friend Col. Goodall has so well said. (Applause.)

The LORD MAYOR: I thank you most heartily for the manner in which you have responded to this vote of thanks. I hope that before you all leave this part of the country, not only will you find time to visit some of our great industries in Belfast, but to have a look over this City Hall. Your President comes from the City of Cardiff. The City of Cardiff has one of the finest city halls in the United Kingdom. I remember some years ago attending a conference at Cardiff, and at a function which we had at night one of the gentlemen speaking said that the Cardiff City Hall was the finest in the United Kingdom. I had the opportunity later on of saying a few words, and I said that the Cardiff City Hall no doubt was a beautiful hall, but it certainly in my opinion was not the finest in the Kingdom; it might come after the City Hall of Belfast.

Now some time ago, one of the chiefs of one of your institutions was giving evidence in a case, and he was asked a question as to the sanity of the individual in question—"Would you give a certificate of sanity in this case?" and he said, "I would not give a certificate of sanity to any man living." Your profession has certainly got this matter down to a very fine degree of skill indeed when it has come to that point, but I believe there is some truth in it. I think we have all more or less of a kink, but, however, I am glad to say that the vast majority of the citizens of Belfast are on the right side of the border so far as institutions are concerned. And that reminds me of a story I heard some time ago (of course you hear so many of them) in connection with our own institution. It was visiting day, and there was a coal-man delivering some coals. He was going along the corridors looking at the different cubicles when one of the patients came along, and seeing this man inside one of these places he pulled the door to and walked on. Presently some visitors came along, and the coalman tapped the door and said, "Look, I am the coal-man. My horse and cart is at the door and I want to get out. Will you please try and get me out?" They took no notice, and passed on. Another party came along, and he said, "I am the coal-man. My horse and cart is at the door and I want to get out." Those people said, "That poor fellow has delusions, and no mistake!" You hear lots of cases of that kind. I think it was the Lord Chancellor of England who went to visit an asylum one day without giving notice that he was coming. The doorkeeper said: "What do you want?" He said, "I am the Lord Chancellor. I have come to visit your institution." The doorkeeper looked at him and said, "Right you are; come in. There are three others here already!"

I thank you most sincerely. I am sure we in this part are most delighted to have you. The only thing is I feel we should have more of these conferences in the City of Belfast. Unfortunately I am sorry to say we have not sufficient and adequate hotel accommodation, but I hope before long we shall be able to meet that difficulty. I again offer you a very hearty welcome, and I hope you will go away with pleasant recollections of your visit to the North of Ireland. (Applause.)

AFTERNOON SESSION.—JULY 2.

At Queen's University, Belfast.

THANKS TO THE RETIRING PRESIDENT AND OFFICERS.

Dr. BEDFORD PIERCE: It is my privilege to move a vote of thanks to the retiring officers of the Council and to those members of the Association who have taken such a great part in the conduct of its business.

As regards our President, those of us who have had the pleasure of hearing

his speech this afternoon will have perceived how fortunate we have been in having him as President. The honour he has done the Association and the graceful way in which he has presided over the proceedings is so close in our memories that I need hardly say more.

Then there are other officers to whom some reference should be made. The next one to refer to particularly is our Treasurer. Dr. Chambers does a good deal of work for us. We know he silently pilots the Association through any difficulties that arise, and we are very much dependent upon him for his counsel, for his tact, and for his extraordinary courtesy and foresight in the management of its affairs. We thank him most heartily.

As regards the Editors of the Journal, similarly we know that the reputation of the Association depends upon its Journal. Its Journal has never stood in a higher position than it now does, and we thank the Editors of the Journal, and lament that the chief Senior Editor is not recovered sufficiently from a serious illness to be present.

I do not know any association in which so much responsible work is undertaken by its officers in the most disinterested fashion. We are again indebted to Dr. Worth, our Hon. General Secretary, for an extraordinary amount of energy and industry on behalf of the Association, and we thank him most cordially.

I should have liked an opportunity to just refer to the great work of our Registrar, but he has passed away, and that I cannot definitely refer to. However, we have had valuable assistance from Dr. Leech. I think he has been already formally thanked by the Association, and again I should like to speak on behalf of the Association of his assistance in filling the breach.

With regard to the members of the Council, I must say little. Being one of them myself it would seem unsuitable that I should say much, but at any rate on behalf of the Association I thank the other members of the Council for their diligence in attending to its affairs and for their persistent and laborious endeavours on behalf of the Association.

I am sorry I cannot do justice to this motion, but those of us who have been in the Chair know the extraordinary amount of work done by the permanent officials of the Association. I do not know whether I should use the word "permanent," but those officials like the Editors, Treasurer and Secretary, who go on year after year, really have done so much for the Association, and the Association is so much indebted to them, that it would be difficult to say more than was suitable in expressing our thanks to them. (Applause.)

Dr. R. R. LEEPER: I have great pleasure in seconding this motion. As a Divisional Secretary of some years' standing I can testify to the great value and whole-hearted zeal of the permanent officers of this Association. I wish also to express here the cordial appreciation of the Association generally of the work done by its honorary officials. (Applause.)

The PRESIDENT: I thank you heartily on my own behalf for the very kindly remarks which have dropped from the lips of Dr. Bedford Pierce, corroborated by Dr. Leeper, and with which you have associated yourselves, and it is my privilege to thank you on behalf of the Council and officers of this Association for what you have said, and I do so very heartily.

INSTALLATION OF THE NEW PRESIDENT.

And now I have the very great pleasure and privilege of carrying out the real function for which I came over to Ireland, and that is the induction of my successor in the Chair.

Let me say with regard to our friend and colleague, Dr. M. J. Nolan, that he is, I think, the Senior Superintendent in Ireland, and Consulting Visitor in Lunacy to the Lord Chief Justices of Northern and Southern Ireland. He has been an outstanding figure in Irish asylum life for many years. He at one time, I think, was associated with the Richmond District Asylum—a place of great repute in my younger days, under the ægis of my lamented friend Dr. Conolly Norman. Dr. Nolan has also been Examiner for our Association and has contributed to the Journal for many years. He has taken a prominent part in all activities in connection with asylum administration. He was the final means of getting the Imperial Government to introduce into the Ashburn Act of 1901 a clause empowering asylum committees to contribute to a central laboratory for the Irish asylums, which had been previously urged by the Irish Division

and other medical bodies. He was also very greatly instrumental in having the Asylums Officers' Superannuation Act applied to the Irish asylums, in the face of great apathy and indifference. Dr. Nolan has taken an active part in the training of mental nurses. His asylum at Downpatrick is a most admirably managed institution, and he takes every opportunity of keeping up with the progress of psychological medicine. He has been a very constant attendant at the meetings of the Irish Division, and has taken a prominent part in them, and also very frequently at the general meetings of our Association. Our friend and my successor is a forceful personality amongst the Irish medical superintendents, and although we have had in this Chair, as you know without my telling you, many men of quite peculiar parts and characteristics, we have not had many men of inches. (Laughter.) In the case of my friend, Dr. Nolan, his parts are combined with inches, and for once in a way we have a man amongst us.

With those few remarks I divest myself of this badge of office, which, as my predecessor and friend truly said, carried with it a real obsession! I have been at my wits' end how to keep it in safety, but I was brought up on respectable lines and I was therefore able to resist the temptation to put it in a safe place.

[Dr. M. J. Nolan (the new President) then took the Chair.]

The PRESIDENT: Before entering on the Presidential Address I desire in the first place to give expression to my very grateful thanks to the Association for the honour I have received at their hands. I accepted the distinction with a sense of the greatest diffidence, having in mind the brilliant records of former occupants of the Chair. At a time, however, when it is more than ever necessary that the objects of the Association should be fostered and strengthened by every possible means, I felt it was my primary duty to the members of the Irish Division to take advantage of the opportunity so gracefully and generously extended to it, to bind it more closely to the English and Scotch Divisions. Hence it is my proud privilege to-day on behalf of the Irish Division to acknowledge the compliment you have paid to it, and to tender you a most cordial welcome to Ireland. Members are here from all parts of Ireland, irrespective of topographical distinctions, showing thereby the solidarity of the Irish Division, and how it has successfully weathered the storm on the seas of stress in recent years.

The President then delivered his address (see p. 507).

Dr. J. G. SOUTAR: I have been asked to express in a very few words the sentiment which I know is in the minds of all of us, that is of thanks to Dr. Nolan for the extremely interesting address which he has delivered. To one who has listened to a great many Presidential addresses, the striking fact is that almost any side of human activity is open to us for discussion and consideration. Dr. Nolan, with a long experience, has reviewed the different methods by means of which greater information has been brought to bear upon our subject, and he has brought them all down to that human point of view which, as he pointed out, is, after all, the essential one. This address is a philosophical one, one which we shall read with the greatest possible pleasure afterwards, and I am perfectly certain it will afford many opportunities for reflection which will be of great value to us not only in the direct treatment of patients, but in the understanding of what is still more important, and what Dr. Nolan has called attention to—that we shall be able to bring to bear more knowledge upon the prevention of these disorders than has hitherto been possible. That is the great work before us, and to that work Dr. Nolan has very distinctly pointed in this admirable address, for which I propose a very hearty vote of thanks in the name of all of you. (Applause.)

Lieut.-Col. W. R. DAWSON: I have been asked to second this vote of thanks which has been so eloquently proposed by Dr. Soutar. I am very glad—as one of Dr. Nolan's oldest friends—to have the opportunity of doing so. There is one thing which I might add to what Dr. Soutar has said, and that is that Dr. Nolan has shown himself by his address to be the possessor of a healthy mind and a sane body. So much the better for the Association, and I have great pleasure in seconding the vote of thanks.

The PRESIDENT: I am much obliged for the remarks of the proposer and seconder.

(Adjourned to the following morning at 11 a.m.)

A VISIT TO PURDYSBURN VILLA COLONY.

Subsequent to the reading of the Presidential Address, the President, Officers and Members of the Association paid a visit to the Purdysburn Villa Colony, referred to by the Lord Mayor in his speech of welcome at the civic reception. They were received by Councillor Wm. Macartney, the Chairman of the Committee of Management, and Dr. S. J. Graham, the Resident Medical Superintendent.

A most interesting and instructive afternoon was spent, and members were, after an exhaustive inspection of this model institution, famous throughout Ireland, entertained to afternoon tea.

EVENING RECEPTION AT QUERN'S UNIVERSITY.

At 9 p.m. the Vice-Chancellor and Medical Faculty of the Queen's University held a reception in the fine Examination Hall in honour of the visit of the Association to Belfast. It was a most enjoyable and hospitable occasion.

This concluded the day's proceedings.

MORNING SESSION.—JULY 3.

At Queen's University, Belfast.

PAPERS.

"A Survey of American and Canadian Psychiatric Opinion as to Focal Infections as Causative Factors in Functional Psychoses," by Dr. A. T. HOBBS, Toronto, Canada.

The PRESIDENT: I desire to announce to you that Dr. Hobbs, of Toronto, is laid up in London and is unable to appear here, but he has sent his paper, which we can accept as read, and it will be published in the Journal in due course.

The programme, then, this morning will be Sir Frederick Mott's paper, and then, if Dr. Marshall is here, we should like to have his paper afterwards.

There is one other matter to which I should like to direct your attention. Prof. Walmsley, whose work has obtained wide-spread recognition far outside this area, has prepared a very fine set of specimens, which are on view in the adjoining room, and it would be well that you should not miss those.

"The Thyroid Gland in Bodily and Mental Disease," by Sir F. W. MOTT, K.B.E., F.R.S.

The PRESIDENT: Sir Frederick Mott has mentioned an apology. I think far from him owing an apology to us we owe him an enormous debt of gratitude for taking us into his confidence, so to speak, in this early part of his new line of research. From what he has shown us it is evident that ultimately some really radical and useful conclusions will be arrived at. I think we must all have been impressed by the importance he attaches—and we must all agree, I think, rightly attaches—to the pre-natal effect on the glands, and subsequently when that is accomplished the interaction in later life. It appears to me—and it has always struck me on reading of these things—that a weakness of research on any one of these glands is that it does not link it up exactly with the others that are so intimately connected with it. Sir Frederick has shown us how that has been done and the care with which it has been done. I am sure we are all exceedingly grateful to him for enlightening us on these points, and we shall be glad to hear any gentleman who wishes to make any remarks.

Dr. F. H. EDWARDS: Sir Frederick Mott has certainly brought one extremely interesting point to our notice to-day, and that is the involvement of the basal ganglia in certain changes which we also get in myxœdema in the thyroid. It is extremely interesting, because I am old enough to remember the time when myxœdema was an exceedingly common complaint in asylums. Before Prof. Murray's discoveries there was no treatment for myxœdema at all except surgical, and at that time—I am speaking of rather over thirty years ago—I can picture nine patients who in appearance were all exactly the same: they might have belonged to one family; they looked as if they had common parents. They varied in age, but they had peculiar characteristics which I need not describe. At that time no treatment, except in a few cases where

I think the engrafting of the thyroid gland from an animal had been attempted, had been carried out, but about that period Sir Victor Horsley found that by getting a glycerine extract of the gland it was possible to get the therapeutic effect of the gland itself. I am speaking now from memory, but I believe within two months all these patients were recovered; certainly within three months they were all discharged from treatment, although in certain cases the illness had lasted for years. Well, it must be perfectly evident that there could be no organic change in the cortex. You can be perfectly certain that such changes had taken place, if they did take place, in another part of the brain, and that, I think, has been perhaps cleared up for us to-day by Sir Frederick Mott in his statement that the involvement, such as it is, is found in the basal ganglia. I wish he had spoken rather more on this association of myxœdema and insanity. He began to take us into the region of other glands and to tell us that we must not regard too seriously metaphysical views. I suppose we all have our inherent defect, and I am sure mine is that I should never get rid of metaphysical views, whatever other views may be brought before us. Certainly he gave us a loophole when he mentioned how the temperament, how emotional shocks and other conditions have such a marked influence themselves on the various ductless glands. I think he particularly mentioned that it is a matter which in itself is far too large to come into a discussion here, but I must say I very strongly follow the views that our President gave us yesterday. I had not the opportunity, as we all should like to have had, of congratulating him on his very wide, very wise, and very statesmanlike remarks, that we must look on these problems from two standpoints.

Lieut.-Col. E. GOODALL: I merely came here to be instructed, and I have been, as one always is, by Sir Frederick Mott, with his philosophical and original observations and manner of putting things. I agree with him that the "mind" is a function of the body as a whole; and the future, I think, lies in the line of investigation which he has been dealing with—the endocrinal and autonomic nervous systems—and also conditions associated with the hydrogen-ion content of fluids of the body—an-ions and kat-ions—in regard to the biological phenomena that we have to deal with. At the present time we in Cardiff are seeking to investigate the phosphorus and calcium content of blood in connection with epilepsy—in intermediate phases of epilepsy and post-epileptic states—and we are up against the proposition of being able to estimate phosphorus, for instance, by accurate methods, likewise calcium. Of course, when one thinks of the hydrogen-ion content, the "pH" content, of the tissues of the body, the whole of life is bound up with this. An alteration, as you know, of the pH content to a very small degree means death, and there is a tremendous field of work in mental hospitals in the estimation of the acid-base equilibrium in various kinds of disorder. We might, for instance, come upon most extraordinary conditions in the course of dissolution in cases of general paralysis and other cases with regard to this phenomenon. The other day I was reading an article by Zondek, who has written, as you are aware, largely on the endocrine system, in respect to the an-ion and kat-ion relationships, and he pointed out that, with regard to the evolution of the tadpole into the frog, this can be achieved more rapidly by administration of thyroxin, but if to the fluid to which is added the thyroxin a particular kat-ion is also added, instead of the normal metamorphosis the tadpole merely increases in length and does not change as a whole—there is simply an elongation of the creature. If, on the contrary, one adds another kat-ion, there is a more rapid metamorphosis. Now, it would appear that the cells of the body have the faculty—a most extraordinary thing, of course, and scarcely conceivable—of putting up a defence against hormonal influences from the thyroid or other endocrinal glands, or promoting such, by availing themselves of kat-ions in the fluids round them—potassium or calcium, as the case may be. One gets here a glimpse of tremendous problems. The whole matter would seem one of control; in the first place, of the central nervous system, over the vegetative nervous centres; of these (at the base of the brain) over the endocrine glands; of these again over the cells concerned, *e.g.*, the heart-cells. There is this chain of control. This complex, with the promotion, obstruction or restraint of the hormonal influences by cellular and selective activities in respect of kat-ions in the fluids about the cells, constitutes a field which affords vast

scope for investigation ; and on those lines—in connection with which Sir Frederick Mott's work in the anatomy of the endocrine organs is an essential factor—we can hope, I think, to make progress. I beg to thank Sir Frederick Mott for his valuable remarks.

Prof. G. M. ROBERTSON : I wish also to associate myself with the congratulations to Sir Frederick Mott for his observations this morning. He has shown us how very important a very small element may be in the life-history of the individual. The absence of a small quantity of iodine may make all the difference between an individual who grows up perfectly normal and another individual who is dwarfed and idiotic. This has been demonstrated by an experiment in Switzerland, as Sir Frederick has indicated, where you have the existence of goitre and cretinism to a very large extent. I believe that the Swiss government have now passed a law that no salt is to be sold in Switzerland that does not contain a very small percentage of iodide of potassium. The amount is infinitesimal, but there is no salt now sold in Switzerland that does not contain this iodide of potassium, and the result is that every person in Switzerland obtains iodine, and this has put an end to the development of goitre and cretinism. Another point is the influence produced by a brief absence of another element—that of oxygen—and a very pretty illustration of the effects of a short absence of oxygen exists in those cases where the heart ceases to beat. That sometimes happens, and by means of a surgical operation and manipulation the heart is re-started, and in those cases where the person lives after this operation delirium invariably follows. The absence of oxygen for a very brief interval of time has such an effect on the sensitive protoplasm of the nerve-cells that that person is delirious afterwards. I also was interested, like Dr. Edwards, in what he pointed out with regard to the destruction of nerve-cells produced by the absence of the thyroid secretion in myxœdema. My experience has not been exactly the same as Dr. Edwards's, because I have seen cases of myxœdema in which it was impossible to produce a complete recovery. At one time, like Dr. Edwards, when I met a case showing symptoms of myxœdema I always gave a hopeful prognosis, and said if the patient was put on the thyroid gland he would make a perfect recovery, but I have had two or three cases in which it was impossible, by pushing the gland to any extent, to produce this recovery, so one must assume in those cases there was destruction of nerve-cells in important areas of the brain, from which the patient did not recover. The subject is a very complicated one, and I just wish, before sitting down, to give an experience showing how very complicated these secretions from these glands are. We had a patient admitted, many years ago, at the beginning of the treatment by thyroid gland, who had been ill for many months. She was put on extract of thyroid, and in ten days as the result of those large doses of thyroid she made a complete recovery, and in a fortnight was out of the asylum. During the course of the next ten or fifteen years on two other occasions she was brought in and treated in exactly the same way and made a recovery and was sent home. On the fourth occasion she became ill again, and I wrote to her own family doctor and said it was no use sending the patient in to us ; put the patient on thyroid. Well he, fortunately, put her on a very small dose of thyroid—I think a quarter of a grain—and the patient nearly died. The father thought the doctor knew very little about the subject and sent the patient in to us. We fortunately also put her on a very small dose—about half a grain—and the patient again very nearly died. Her heart was very rapid and irregular, and there was so much disturbance that the assistant medical Officer was called up and was beside her for about two hours, and during any part of that time she might have died. That patient had previously taken 60 gr. a day for a week, and here on this occasion she could not take half a grain of the extract of thyroid gland without running a risk of death. The mother was very anxious we should try this treatment again and every three months I tried it, but sometimes the danger symptoms supervened and I could not carry on. However, after about a year we were again able to give her the thyroid extract, and on this occasion she took 60 gr. a day for ten days without dangerous symptoms, but unfortunately on this last occasion the patient did not recover. So it seems to me there is a great deal with regard to the thyroid gland and these other glands that we have yet to know. It has very important clinical bearings, and I have to thank Sir Frederick very much for his paper.

Dr. C. H. MARR: I have followed with very great interest the lecture of Sir Frederick Mott. One has always regarded affections of the thyroid gland as being practically the best example we have of the physical basis of mental disorders. My attention was very early directed to myxœdema and the interest in the thyroid gland when I entered an asylum, first of all, some thirty years ago. I entered in that period between Dr. G. R. Murray's first observations and before the adoption of his treatment by thyroid and glycerine, and I used in very grave cases of myxœdema a sheep's gland, taken from a sheep killed on the farm, put on bread and butter, with the result that the patient recovered within a short time; the hair grew and she resumed all the appearance of a normal person, and I was able to follow the case for fifteen years. She took up normal life, and for fifteen years she kept quite normal. The relationship of the thyroid gland to the normal condition of the body is intensely interesting when one considers that in the infant, and in the early age, the amount of mucous tissue in the body is four times greater than it is in the adult; that as the person grows the mucous tissue disappears and is replaced by higher forms of connective tissue. Then at the other end of life you have an increase in the size of the thyroid gland and the increase sometimes goes on, but the thyroid gland diminishes as the gonadal glands decrease, and the relation in the discharge of the tissue in the menstrual period certainly has some bearing on the size of the thyroid gland. I would ask Sir Frederick whether he has noticed in cases of neurasthenia an increase in the size of the thyroid gland in men, showing that it has some connection with the physical exhaustion, and that there is some attempt on the part of the thyroid gland to renew the condition of the nervous system and establish its former position. I need not say with what great pleasure I have listened to Sir Frederick's paper.

Dr. J. G. SOUTAR: We are very deeply indebted to men like Sir Frederick Mott, Dr. Goodall and others, who are able to pursue these extremely delicate, difficult and interesting investigations. The great majority of us are quite incapable of it, but, fortunately, we have the opportunity of getting from them information that it is possible to apply in clinical work, and which enables us to understand some of those difficulties which are constantly cropping up and which are insoluble from our point of view. One point that has been brought out very strongly to-day is this: that we have to recognize that whether there be such a thing as mind apart, mind, after all, must have a mechanism for its expression, and any failure in the mechanism of the mind consequently shows us disorders in what we call the mind itself. I think we need have no great conflict as to whether the mind has got a physical basis or not, for, at all events, the mind does have a physical mechanism through which it expresses itself, and if that mechanism be out of order the phenomena of mind, as presented to us, are disordered. I think we might leave the matter at that point, and I do not think we can get any further than that at present. Sir Frederick Mott has called our attention to the fact that not only do cases occur of gross failure of the thyroid secretion, but that there are other cases in which the normal secretion in the individual is always below average, but sufficient in the absence of unusual demands upon it. Under stress, such as an infection, signs of a degree of sub-thyroidism are seen. The secretion is in part used as a defence against the infection, and, in consequence, the general metabolism is interfered with. I have seen cases in which the disappearance of signs of sub-thyroidism has been consistent with the removal of a toxæmia arising in teeth or tonsil or bowel, and without administration of thyroid. I understand better after what we have heard to-day the why and the wherefore of such clinical observations. In the paper we have heard to-day, which has ranged over a very large subject, there are innumerable lessons that I have no doubt we will learn when we have the opportunity of seeing it in print, and carefully considering the various points that have been raised. I join with the others in an expression of thanks to Sir Frederick for once more bringing before us work that is invaluable.

Sir FREDERICK MOTT: I am not prepared to discuss the matter with Dr. Edwards about mind and body, but I suppose he will realize with me the truth of Galton's statement that the furniture of the mind is our experiences and the bonds that unite them. If you go so far I will agree with you, but certainly I think I pointed out clearly that I quite agreed with the President when I said that the disposition impressed by Nature—by that I mean the hereditary

properties—goes with the mind, as we know, perfectly well. I think from that point of view we have to consider the problem as dependent on two factors, namely, the disposition impressed by Nature and the disposition imposed by environment. What I say is, we can get at the disposition imposed by environment. We recognize the fact that there are a number of people who have a narrow physiological margin in their highest evolutionary level. I put it in Jackson's terms—that any disturbing cause of the body may just overbalance the condition of the mind and lead to mental disorder. That is my position, and I think that is a rational position to take up. I believe myself that the only way is to accumulate facts and try and draw deductions from a sufficient number of facts.

Both Dr. Goodall and Dr. Robertson were really very kind in their remarks about my work, and I fully appreciate what they have said and the value of their remarks.

Dr. Marr asked me a question with regard to neurasthenia. When I was in charge of Maudsley Hospital, during the battle of the Somme a number of patients were sent over quite early after the fight had taken place. Quite a number of these men had tachycardia, tremors and an enlarged thyroid—in fact all these signs of Graves's disease, accompanied by terrifying dreams. I noticed that when the terrifying dreams ceased, and, therefore, this mental conflict ceased, then these signs disappeared.

Dr. Roussy, who was an expert on the war, pointed out that he thought a great many of these cases were due to the effect on the adrenal glands affecting the thyroid, seeing the correlation of the adrenal with the thyroid. I always show the picture of those men as a beautiful example of fear. There is the staring eyes, and it illustrates the fear very well when I lecture upon the expression of the emotions. As soon as ever the dreams ceased and they were getting natural sleep all these signs of Graves's disease disappeared. So I have not the slightest doubt about it that any contemplative fear produces cutaneous effects through the adrenal glands.

I should have been very glad if Dr. Chalmers Watson had spoken. I did not refer to his valuable experiments on animals, but perhaps he will tell us something about those later. He did a number of very valuable experiments on animals in connection with the thyroid gland.

I should like to thank you all very much for listening to me so patiently, and also to thank those gentlemen who have spoken and congratulated me on my efforts, and I appreciated their remarks very much indeed.

“Further Reflections on the *Role* of Auto-Infection in the *Ætiology* of Acute and Chronic Mental Disorders,” by Dr. D. CHALMERS WATSON (see p. 537).

THE PRESIDENT: It is some years ago since we were so fortunate as to hear Dr. Chalmers Watson for the first time on the subject which he has so exhaustively dealt with to-day, and since that time I have been constantly wishing and hoping for an opportunity of hearing him again. I was delighted, therefore, when I saw his name down for this contribution, and notwithstanding the light way in which he dismissed it as not a very elaborate paper we can all see the amount of work and observation he covers.

SIR FREDERICK MOTT: I have spoken rather often to-day, but I cannot lose the opportunity of congratulating Dr. Chalmers Watson on his very excellent and lucid exposition of this subject from a general physician's point of view, and of saying how thoroughly I agree with him in thinking that we should not focus our attention on the teeth only. The lady whom he was examining was not quite truthful, I think, in saying that at Birmingham they only looked to the teeth. As a matter of fact they have appointed a gynæcologist, and find that sepsis occurs very frequently in the uterus. They have also appointed a dentist and a bacteriologist, and every possible source of infection is investigated in every case. Moreover, I should like to say that Dr. Pickworth, who is here, has carried on some most valuable observations on the different kinds of streptococci that are found in the septic teeth. Some of them no doubt are virulent, and some are not, and I think in that direction it is very important. There was a very valuable paper a little while ago in the *Lancet* by Dr. Hurst—I daresay some of you saw it—on pernicious anæmia, and he showed that you only got pernicious anæmia from septic infection of the mouth when there was

achlorydia, and achlorydia preceded the mouth condition; and no doubt you do not get the subacute combined sclerosis in any of those cases that have not this condition. It is the hydrochloric acid which acts as the antiseptic and stops these organisms getting into the intestine, where they are not normal inhabitants, and I cannot help thinking that cirrhosis of the liver is due to the disturbance of the gastric functions and the allowing of these organisms to pass through into the intestine, so that you get a septic absorption and cirrhosis; and that condition of the liver in chronic alcoholism is due more to the septic absorption than actually to the alcohol. Alcohol is a factor, but the sepsis is the important factor, and a test meal should be given and the amount of hydrochloric acid estimated. I believe Dr. Pickworth is doing that at the present time in a number of cases. He has not progressed sufficiently yet to give any authoritative statement, but still the results are important so far as they go. I quite agree with Dr. Chalmers Watson in all that he said. We should not look at one part of the body only. It is not only a question of the teeth, although the teeth are probably the commonest source of infection. I should like to mention a case I had the other day. I was asked to see the wife of a Guardian, who was in the mental department of an infirmary. She was just about at the climacteric period, and she was very bad indeed. We found a very bad septic mouth—a plate that had not been removed for I do not know how long, and as septic as it could be. That was taken out and her mouth cleaned up, and she was given granulated β naphthol charcoal to try and sterilize the intestine. That woman recovered in about a month and was discharged. I am quite sure if a number of these cases were taken early there would be good results, and that is why I think it is so important to have a hospital in connection with all these institutions, so that every possibility could be provided for using every source of information with regard to chronic sepsis, whether it be autotoxic or from microbial poison, and in that respect I think Dr. Chalmers Watson's proposition to have a research conducted on those lines is a very valuable one. I was very much impressed with Dr. Goodall's communication, when he showed the condition of the bowel by X rays, and I should like to ask him whether he has continued that, because it seems to me that the infection by the absorption of the toxins by the bowel may play a very important part. If that is so is it right that people should be brought into asylums to get dysentery, because if they get dysentery they have a chronic surface of absorption. I had a good deal to do with that at one time, and I had a difficulty in getting superintendents to believe that dysentery was an epidemic disease. Of course one was able to prove it absolutely by the fact that one ward would have more dysentery cases than all the rest of the asylum, or even all the asylums put together. That was sufficient evidence, I think, but they had got the term "colitis." It was a very convenient term; they did not like the word "dysentery." It was a remarkable fact that when colitis came in dysentery disappeared from the reports of the asylums and colitis took its place. Now I think superintendents are really believing that there is something in the bodily condition. We have got away from that old metaphysical idea of the mind being something apart from the body, and therefore I think to have a man like Dr. Chalmers Watson, who occupies such a high position in the Edinburgh Infirmary, coming here to-day and telling us a general physician's point of view, is of the greatest value, and I think the Association is very fortunate in having him here to-day.

The PRESIDENT: I should like to make one remark with regard to something Sir Frederick has just referred to. I was one of the superintendents who took exception, not to the term "dysentery," but to calling it "asylum dysentery." I came from Richmond Asylum to a part of the country where we admitted new cases suffering from dysentery, and for that reason I objected to the term "asylum dysentery." At the same time I am myself a great supporter of all that Sir Frederick has laid down as necessary, and have adopted in my report to my committee and utilized all his valuable recommendations, with the absolutely perfect result that for a large number of years—I suppose practically twenty-five years—with the exception of one man who continued to be a carrier, we had no patients suffering from it. Curiously enough after that long interval that man had an acute recurrence and died of it, and we found the old conditions. I think perhaps others like myself felt it was an unnecessary term to call it "asylum dysentery," inasmuch as we found it elsewhere as in the neighbourhood of asylums.

SIR FREDERICK MOTT: I have not seen it anywhere else except in the asylums, and there I saw it in abundance, and if I call it "asylum dysentery" it is because of that. You mentioned carriers. I think that is a very important matter, and as Dr. Bond is here, who was a great sufferer, I say so. I think in the opening of any new asylum great care should be taken not to introduce into that asylum cases of carriers if it can possibly be avoided.

DR. C. H. BOND: May I reply to Sir Frederick, and also take the opportunity to express the very great pleasure with which I have listened to Dr. Chalmers Watson. With regard to Sir Frederick Mott's recommendation and suggestion, it is almost a counsel of perfection. He has alluded to my own difficult experience when 1,300 cases were transferred at the opening of the Long Grove Hospital to that institution, with the result that when we had been going some considerable time, despite the newness of the institution, its up-to-date facilities, and above all, the fact that Providence blessed me with a medical staff of exceptional keenness and ability—in spite of all these advantages we topped the record in England and Wales for dysentery. We fully realized that dysentery was indeed infective. But despite segregation and numerous hygienic precautions, and although we overcame its excessive incidence eventually, for a long time we headed the list in England and Wales. Now why? They were 1,300 cases that had been boarded out in different mental hospitals over the country. They dated back for years, many of them, and there were no records then such as we have now, thank goodness, as to which of those cases at some time or other had had dysentery. Nowadays at every mental hospital there is a record of cases that have dysentery, and the record should be, and I hope is, passed on to any institution to which such a patient may be transferred. I quite agree no known carriers should be sent to a new hospital, but for all that it would be impossible, I think, and not practicable, to lay down a rule that no one who had had dysentery should be admitted. I speak with diffidence, not having enough technical knowledge on the point, but I have heard some of those experienced in bacteriology suggest that the organism, whichever type it be, has various cousins, and that an institutional community acclimatized and apparently more or less immune to dysentery may easily be reinfected by the introduction of patients similarly immune, but by not the same cousin. I think that was my experience. I remember in the early 'nineties the old arguments as to what dysentery was, and its inclusion under the non-committal and soothing name of ulcerative colitis, etc., and I well remember Sir Frederick's investigations in the early days when he first took up work in the London mental hospitals. In justice to some who held another view—I was not one of them myself; I was too young to hold a view at all—but in justice at any rate to my own Chief, I would like to say his view was this: that it was not an infective disorder at all, but that the insane were definitely predisposed to this—call it what you will—colitis, and I think his argument was that it was due to lesions of the sympathetic.

SIR FREDERICK MOTT: Yes, and I showed that the sympathetics were perfectly normal.

DR. BOND: Yes, but in justice to him, and others who believed in this nervous origin, it was a real belief they held, and not directed merely to avoid the recognition of infective disorder in their midst.

SIR FREDERICK MOTT: Yes, but no basis for it.

DR. BOND: I just want to say this in conclusion. It is a disappointment that this valuable experiment which Dr. Chalmers Watson suggests to-day on quite modest lines is not actually being conducted on a big scale indeed, as he and many of us hoped it would be. I still hope that some means may yet be found to put that experiment into force, and that we shall see it, perhaps not in so large a number of mental hospitals as at first intended, but in a sufficient number to make results certain. May I say before I sit down that the case he cited to you is known to me officially, and if so much good and relief to very distressing symptoms of chronic mania can be obtained, do let us take this lesson to heart. The problem to each of us who has an asylum to manage, and the hardest bit from the treatment and from the administration point of view, is the ward where the worst, the so-called refractory, patients are. I do not know whether after all it is an administration problem at all, or whether it may not be a laboratory one, but I believe many of these chronic manias could be relieved by the measures Dr. Chalmers Watson advocates, and then, though perhaps not cured, we should not have the troublesomeness to handle. I do not know; perhaps I am too sanguine.

Lt.-Col. E. GOODALL: I think Dr. Chalmers Watson was about the first in this country to publish a paper showing the results of the passage of a barium meal in a series of mental cases, or allied cases, and also showing the results of staining films of the colonic washes with Gram and carbol-fuchsin stains, which demonstrated the preponderance of the Gram-positive organisms, chiefly anaërobæ, in the second colonic washes, from cases of marked mental disorder. That was a most stimulating paper of his, and it really led my colleagues and myself to take up this matter, and, as Sir Frederick Mott has said, we published a series of 12 cases of the so-called dementia præcox type. Since then we have done other 24 cases, making 36 in all, and Dr. Robert Knox considered those of sufficient importance to publish in the *Journal of Electro-Radiology*, which he edits, and he considered they were pathological. The whole lot of the 36 exhibited the same conditions roughly—stasis, ptosis, spasticity, etc.—and those conditions were in his view pathological; we relied upon him for the normal criterion. You know it is so very difficult to get normal cases; the male nurses are not so very willing. I have not too many of them where I am—they are mostly female nurses—and it is more difficult still to get controls out of them. We are carrying on with that investigation now. It is rather an expensive thing, of course. A patient comes in, and you take a series of films for 48 hours—that is, about 6 films. Then you do it once or twice in the course of the stay of the patient, and then you do it when he goes out, and by the time you have done that it will cost you some pounds per patient. Still, there it is. We carry on with that, and we also do test-meals in those cases. It is rather difficult to correlate these observations because one interferes with the other. One takes the films first of all, and then does the test-meals, and all the time the patient has to wait for treatment. This is not altogether satisfactory, but it is necessary in the interests of science, and unavailable in the interests of that particular patient. Of course, it remains to be seen. I think Dr. Chalmers Watson rather takes the view that the test-meals are scarcely worth while, though I may be doing him an injustice. I think we should get a series. We have about 50 now, and we want at least 100. There are not only the fractional tests every 20 minutes for a period of about five hours, but we also give the patient charcoal the night before to see whether he has cleared it out, as it ought to be cleared out, in twelve hours. Then we give him the oatmeal meal, and we see whether the starch is cleared out, or the sugar, as the case may be; if the starch has not disappeared at the end of about 2½ hours, that is abnormal. Then there are the fasting gastric contents, which one draws off before one does the fractional tests. These ought not to be more than about 20 c.c.—anything from 5 to 20. In some of these cases you get 80 c.c., and there again you want controls. I had a man admitted who was not insane in any sense; he had been indulging in drink. He was a criminal who had been stealing. He came in and we considered him a suitable case to use as a control. He went through the whole performance, but he had no free hydrochloric acid, and his stomach had charcoal in it after about fourteen hours, and altogether he was a wrong one from the point of view of control.

Then as regards Dr. Chalmers Watson's colonic lavage; so far as we are concerned we got the idea from him; we do it on his suggestion. I have got a senior medical officer who is interested in this work, and he gives the colonic lavage regularly twice a week, first one and then the second—two pints each time, repeated twice a week. The second wash, as Dr. Chalmers Watson has pointed out, should be clear and comparatively inoffensive and free from positive organisms, but it is not so. I fully bear out what he said; it smells horribly, and is full of positive organisms. We put our cases on this systematically, and we have some cases in who are scarcely "mental" at all—quite fit for a general hospital. My contention is they had no business to come. These people have cleared up remarkably well, and I consider it is a most valuable thing, and I can recommend that form of treatment. I recommend it in private cases that I see in Cardiff, and I find mental nurses supplied from London do not know how to give a colonic lavage to start with. However, I think on those lines this work is extremely important and interesting. It seems to me that you are bound to have radiologists and gynecologists and pathologists and bacteriologists. It is all very well for Birmingham and for us. We have medical schools attached, and these specialists are there; we give them an honorarium and they come up and do

this work, and it is sometimes extraordinary what they find. You also need a highly trained nursing staff incidentally; you have to have trained nurses who can deal with all the specialist's nursing requirements. But what about the county asylums? Where are they going to get these men from? I remember that at the Mental Hospitals' Association, where we were talking of these things, a member said, "We do all that. We have dentists and radiologists, and so on." I said, "Yes, you have them up when you want them to look at a man for some particular thing from which he is suffering, but you need them on the regular staff." I mentioned a case yesterday where the radiologist from Cardiff Infirmary discovered pus in a sphenoid. We could not spot it, but it was in the radiogram, and he turned it all out and showed it, and I should think it was not doing the man any good.

I think we are greatly indebted to Dr. Chalmers Watson. I consider him a most important link between us and general medicine. I congratulate him upon his address.

Dr. J. O'CONOR DONELAN: I do not know that I can discuss the paper, but there was some reference in the discussion to colitis and asylum dysentery at Richmond Asylum, and as my life has been spent at that institution at one time famous for the number of cases, I would like to say a word about it from the practical point. In my early days I was in charge of a portion of an institution which had any amount of cases of this colitis or asylum dysentery, and it was most disheartening, because no matter what you did, they nearly all ended fatally. I left Richmond, and its reputation did not improve in that regard. I came back to Richmond and I found it pretty much as I had left it, and I immediately set to work to try and improve it from the hygienic standpoint. The most striking feature of the Richmond of old times was the cold in winter and the damp and the discomfort of it generally. In the first instance I pointed out to the Committee the absolute necessity of putting in abundant heating plant. We got up the old rotten floors, that were saturated, and were constantly mopped. We put in polished floors and abundance of heating, and made the place comfortable. Whether it was this or not, I do not know, but the colitis disappeared, and the death-rate fell from 16 to 5. In that state of things I am inclined to think that if there be a definite disease called "asylum dysentery," it is a disease that is due to bad hygienic conditions. It is a disease largely due to damp, cold and general discomfort. Anyhow, with the altered conditions of the house the colitis and dysentery disappeared, and we have not had cases for a very long time. Within the last month or so one of my assistants drew my attention to the fact that there was a case of this kind in hospital, and I felt very sorry to hear about it. Of course we examined him, and to my surprise and gratification I found that the result of the examination was that it was a case of paratyphoid. It was not a case in which you would expect to find it, because the patient was over 50 years of age, but unfortunately we were not able to have a *post-mortem*. I remember in my early days, when there was such a high death-rate with these cases, time after time, in hundreds of cases I suppose, I made *post-mortems*, and they all showed the same thing in the lower intestine. That condition seems to have disappeared. I am glad to say that at present we are free from that disease, and I attribute it chiefly to the improved hygienic conditions—warming the place as much as possible, and doing away with the mopped floors. (Applause.)

Sir FREDERICK MOTT: I should like to say I regard this as a specific disease due to specific organisms; that it is not due to lack of warming arrangements or anything of the sort. I have no doubt the hygienic conditions made an improvement all round, and probably the fact that you were aware that people died of dysentery led to the great improvement in the Richmond Asylum, but I do not think it altered the cause, which is the specific organism being swallowed. Another point I should like to mention is that we found the attendants very often carried the organism through not knowing it was an infective disease.

A LUNCHEON GIVEN BY THE MINISTER OF HOME AFFAIRS FOR NORTHERN IRELAND.

Members and their friends received hospitality at the hands of the Right Hon. the Minister of Home Affairs for Northern Ireland. Mr. S. Watt, C.B.,

C.B.E., of the Department, presided. Luncheon was served in the M'Mordie Hall of the Students' Union of Queen's University.

TOASTS.

Mr. S. WATT : I must, in the first instance, apologize for the enforced absence of the Minister of Home Affairs, who is recovering, and I am happy to say most satisfactorily, from his recent severe operation. (Hear, hear.) Before he was laid aside from his duties he had been looking forward with keen pleasure to welcoming your distinguished Association on behalf of the Government of Northern Ireland, and I know that it has been a deep disappointment to him that he has been unable to be present here to-day. The Parliamentary Secretary of the Ministry is also, I regret to say, compelled to be absent, as he is engaged on urgent professional business in accordance with a long-standing arrangement, and he has asked me personally to convey to your Association his deep regret that he is unable to preside on the Minister's behalf.

It therefore becomes my privilege, and I count that privilege a high one, to extend to you, Mr. President, and to the members of the Medico-Psychological Association a hearty and sincere welcome to Northern Ireland.

As the Department to which is entrusted the administration of the Lunacy Acts, the Ministry of Home Affairs is deeply interested in the activities of your Association, and the Ministry has been fortunate in securing as their Chief Medical Officer (I refer of course to Col. W. R. Dawson)—(Applause)—one whose official life has been spent in lunacy administration. The fact that he was a President of your Association is sufficient to show that the Ministry's choice of Col. Dawson has been fully justified. (Hear, hear.)

Possibly in no corner of the United Kingdom do more happy relations or more friendly feelings exist between the medical profession and the population generally than in the province of Ulster. We in Ulster are a homely people. We prize the simple virtues of life. Gratitude is one of these simple virtues which the Ulsterman possesses, and, what is perhaps better, practises. Medical work throughout Ulster, and indeed elsewhere, affords endless opportunities for the performance of deeds of kindness, and in many a home in Ulster there are stored treasured memories of kindly acts done by the members of your profession. If these are the feelings entertained towards the medical profession generally, you may rest assured that an added sympathy and added interest are felt towards the particular branch of the medical profession you represent, whose special mission it is to care for those unfortunate members of society whose reason has been affected, and to devise means of alleviating their misfortune.

When I mention that we have with us some of the most distinguished alienists, not alone in the United Kingdom, but throughout the world, the people in this province will realize the great work which this Society is doing. Where all must be regarded as experts in this branch of medical science it is perhaps somewhat invidious to mention particular members of your Society. I trust, however, that I may be excused if I refer expressly to the name of Sir Frederick Mott, F.R.S.—(Hear, hear—Applause),—the President-elect of your Society next year. He is a world-wide authority on the pathology of nervous and mental diseases. I may perhaps also refer to Col. Goodall, your ex-President—(Applause),—who is one of the pioneers in this country in the application of scientific methods to the treatment of the insane.

I would like also to refer to Prof. G. M. Robertson, of Edinburgh—(Applause),—who presides over the famous mental hospital at Morningside, and whose admirable work in the development of mental hospital organization is so widely known. We have also here with us some officials—and I feel here in rather a delicate position, because in Northern Ireland officials are sometimes not very well received. But I think it is only right that I should mention three very prominent officials we have here to-day. We have Dr. C. Hubert Bond—(Applause),—a Commissioner of the Board of Control in England; Sir Arthur Rose—(Hear, hear),—Chairman of the General Board of Control for Scotland, and Dr. C. Hamilton Marr also—(Applause),—the Commissioner of the latter Board.

These names, as well as the other members of your Association, are sufficient

to indicate the high place which it fills and to commend to the population throughout the United Kingdom generally the Association's activities.

The Government of Northern Ireland, I can assure you, feels that your Association has done a great honour to this province in selecting one of their resident medical superintendents of the asylums in Ulster as your President this year. I would like to say a great deal more with regard to Dr. Nolan than perhaps he will allow me to say, but one thing I do feel certain of, and that is that he is sure to attain high position, and I feel sure he will maintain the high traditions of your Society. There is one great advantage that Dr. Nolan will have, I fancy. He has been in actual charge of an asylum for a very considerable time, and it will be a great advantage to him to have not only the medical knowledge, but also the knowledge of administration.

Perhaps I had better close with saying that we hope you have enjoyed your visit to Northern Ireland, and we feel certain that your deliberations here will be profitable, and will do much to lessen the sufferings of the unfortunate people who are mentally afflicted. (Applause.)

As evidence of the sympathy we all feel towards the Association and our high appreciation of it, I ask you to drink with me the toast of "The Medico-Psychological Association of Great Britain and Ireland," and I couple with it the name of Dr. Nolan, your President.

The PRESIDENT: I had no notice of this arrangement, but happily what I have to say can be said in a very few words. I wish to express the appreciation of the Association for the great hospitality of the Minister of Home Affairs. I am glad to have the opportunity to say that, and to say also how we who live in Northern Ireland appreciate the relations which exist between the Ministry and ourselves. The Ministry of Home Affairs is very closely associated with us. It is no remote Ministry which requires a lot of wire-pulling to get it to listen to one's requirements. It is a Ministry that is accessible and cordial and sympathetic, and in taking over a department which is particularly surrounded with difficulties the Ministry has tried and has succeeded admirably in surmounting all those difficulties.

I cannot say more than I feel, and that is that the Association most cordially thanks the Ministry for their hospitality to-day, and I would like to express the hope that the indisposition of the Minister for Home Affairs will soon be terminated by convalescence. I ask you, Sir, to accept from me on behalf of the Association our warmest and most cordial thanks. (Applause.)

Sir FREDERICK MOTT: I have been asked by the President to second this vote of thanks to the Ministry of Home Affairs for Northern Ireland, and I am sure I do this with the greatest satisfaction. We have had a most cordial reception everywhere in the North of Ireland, as I most fully expected we should do. It has been a great satisfaction to me to come over here. Dr. Nolan was good enough to ask me to come, and I said I should make an effort to do so, because I have always had great sympathy with the North of Ireland. (Hear, hear.) I have been over here many times and stayed on the coast. I have had very great friends in the North of Ireland, and I hoped that they would have freedom and remain free. It is a happy omen, I think, that we should have here to-day the Secretary to the Ministry, Mr. Watt, and to find the very happy relations which exist between the medical profession and the Ministry, because I think that no section of the public can really get to the hearts of the people like the medical profession. They can do a great deal, I think, towards harmony, and to help the Government where that happy cordiality exists. Mr. Watt was kind enough to refer to my work. All I can say is, I am very grateful to him, and grateful to the members of the Association for having elected me President to succeed Dr. Nolan. I hope I shall be able worthily to follow him. Dr. Nolan occupies a high place in the profession and everybody respects him in every way possible. He knows a great deal more about the lunatic than I do; I think I know more about him when he is dead, but still I have studied him alive as well, especially during the war. I think that administration is a very important factor, and it is the human factor that amounts to so much in the administration of an asylum, and indeed all through. I heard Mr. Wheatley speak the other day. He visited the London County Mental Hospital, and he said, "It is not the building only; it is the human element inside

that is more important." That is why I am quite sure that Dr. Nolan's asylum is everything it ought to be.

I will not take up your time any further. I have very much pleasure in seconding the vote of thanks. (Applause.)

Lieut.-Col. W. R. DAWSON: I have been unexpectedly asked to reply on behalf of the Ministry to your very kind vote of thanks. In doing so I feel somewhat like a character in one of George Birmingham's novels. There is a novel of his called *Dr. Whitty*, in which he describes how Dr. Whitty got married on one occasion—(Laughter),—and when he was on his honeymoon learned that a presentation was to be made to him and that there was to be a reception. Dr. Whitty was quite sure it could not be properly done if he did not do it himself, so when he arrived at the entrance to the village, he got up on the platform and made a speech welcoming himself back, and then he got down and replied to the speech. In fact I feel rather like a case of dual personality. On the one hand I am a member, and have been for years (and hope I shall be to the end of the chapter) of the Medico-Psychological Association, and you have just done me the very high honour of electing me an honorary member, for which I am extremely grateful. But now I am not speaking as a member of the Medico-Psychological Association, I am speaking as an official of the Ministry of Home Affairs in the Government of Northern Ireland, and I thank you on their behalf most sincerely for the very kind words in which this vote of thanks has been proposed and also for the way in which you have received it. It has been a very great pleasure I know to us all to receive you here. I can speak from personal knowledge in support of what the Chairman has already said as to the good work done by the Association and can assure him what thoroughly decent fellows all the members are, with the exception of one lady who is also a member, and she is a decent fellow too!

Well, I will not take up your time. I know you are very eager to get back to the work of the Association. (Laughter.) I will simply conclude by thanking you once again most heartily for this vote of thanks, and expressing our great gratification at receiving you here, and also our hope that you have so far enjoyed and will continue to the end to enjoy your visit. We trust not only that you will derive satisfaction and pleasure from your stay here, but also that we possibly may have had something to show you which may be of use to you in the practice of our branch of the profession. (Applause.)

AFTERNOON SESSION.—JULY 3.

At the Queen's University, Belfast, the President in the Chair.

PAPERS.

"Some Notes on Encephalitis Lethargica," by Dr. ROBERT MARSHALL, Medical Specialist, Ministry of Pensions, Ulster Region.

The PRESIDENT: You must have all listened with great interest to the admirable paper contributed by one of our most recent additions to the Association, who, I am sure you will all agree with me, will be a most valuable asset to the Association. (Hear, hear.)

Sir FREDERICK MOTT: I have listened to Dr. Marshall's paper with a great deal of interest, because recently I have interested myself in studying this disease. As early as 1918, one year after Economo described it first, Prof. Marinesco, of Bucharest, a very distinguished neurologist (he had to provide some means for his living and he came and worked in the laboratory at the Maudsley Hospital), showed the changes in the region of the mid-brain characteristic of the disease. I went to Paris some time afterwards and I saw the preparations of Prof. Pierre Marie, showing the destruction of the locus niger, and he attributed what occurred in these cases to the destruction of this group of cells. I should like to ask Dr. Marshall whether he has examined microscopically the brains of such cases as died, and whether what he calls the punctate hæmorrhages are really hæmorrhages, and not, as we found, really very dilated vessels with chronic perivascular cell infiltration. I should like to ask his opinion also with regard to the theory of Dr. Levaditi in relation to the causation of the lethargy. It is very striking when you see the section through the mid-brain or the pons,

the vessels filled with blood and congestion of the parts, and I should like to ask whether he thinks that Dr. Buzzard's explanation is true; that is to say, that there is an œdema of all this mid-brain that blocks the duct in such a way that the fluid cannot escape from the ventricles of the brain, and so accounts for the lethargy? For my own part I do not think that can be true, and what the cause of the lethargy is I do not know exactly. I have not found any satisfactory explanation. That is one point.

Another point is whether he would not correlate the very small number of lymphocytes in the fluid with the fact that the meninges are seldom affected? In the cases I have examined the meninges are not affected at all, and that would be very useful in determining the diagnosis between tubercular encephalitis and this lethargic encephalitis. I saw in consultation a case the other day in which the diagnosis of lethargic encephalitis had been made, but it showed a very large number of lymphocytes. A few days later the boy died of tubercular meningitis; the case was diagnosed subsequently as that.

Netter, whom Dr. Marshall refers to, regards these cases with late manifestations that occur, not as sequelæ, but a continuation of the action of the virus, whatever it is. I should like to ask Dr. Marshall's opinion with regard to that, because it seems to me in that respect it is something like syphilis. I think this disease has thrown a good deal of light on the functions of the basal ganglia.

One can easily understand why such varied eye symptoms occur, and why they come on so early, because if you look at the microscopic specimens you will see that the inflammation is present especially around the aqueduct of Sylvius. One group of cells may appear normal, while another group of cells will be in the midst of inflammatory material. We can understand why one eye muscle may be paralysed and the other escape, and that reminds me of a case that we had in St. Thomas's Hospital on which we examined candidates. There was a very obvious paralysis of the internal rectus on one side, which all the candidates spotted, but they did not spot a paralysis of the superior rectus in the other eye, although it was quite obvious. Another very interesting point is this. I looked through the Ministry of Health second Report, and there were, I think, 271 cases with sequelæ, showing that 31 of the children and adults had some mental symptoms, mostly as regards their moral character. Children became cruel; they came up before the Courts, and Dr. Shrubbsall said quite a number of cases had arisen in connection with this last epidemic in London; not many cases according to the asylums' reports. In Birmingham so far only two cases have been admitted to the three Birmingham asylums who have suffered with mental affection. Of course one always has to remember in regard to these isolated cases that they may be due to a potential lunatic getting lethargic encephalitis and then developing the symptoms, but with regard to the children and young adults the cases are so numerous that it must be due to some affection of the brain. It would be interesting to know whether the cortex is not affected in these cases, because one cannot explain it by the inflammatory changes in the mid-brain and the basal ganglia. Of course one can explain the rigidity, the tremors, the choreiform and the athetoid movements and the rigid state—changes which are found in the mid-brain, affecting specially the locus niger, the corpus striatum, the hypothalamic region and the globus pallidus, but what I think is very important is that these mild cases that you would never suspect are the cases which afterwards may have these chronic symptoms. I hope I am not taking too long, but I would like just to refer to two or three cases. I went to the Camberwell Infirmary to lecture to the class on Psychological Medicine, and I had to look out some cases. Dr. Masterman, who has been very good and provided me with excellent cases, said there was a case of paralysis agitans, and I said that would do splendidly. I found it was a woman of about 35—and I think this is possibly one of these cases I have just referred to. I said, "When did this come on?" She said, "It came on nine or ten years ago." I said, "How did it come on?" "Oh," she said, "I had headache and fever. I thought it was influenza, and then I began to squint," and then later on apparently this stiffness of the muscles came on, and the characteristic tremor and the gait and everything—a typical case of paralysis agitans. Then there was another case I saw the other day. There was no history in this case, and I am not sure about it. He was a man of 50, and I was told it was a case of hemiplegia. I went up and saw this man, and found the reflexes were not what I expected. He

had great stiffness in the right arm and right leg and a mask-like expression. He said "it began two years ago, and it has been gradually getting worse and worse." He had no tremors at all—none of the characteristic tremor that you get with paralysis agitans—but he had this stiffness. Then he said he was getting stiff on the other side—the left side—and he was getting stiff all down the left side, and when I got him out of bed there was a typical Parkinsonian syndrome without the characteristic tremor. A good many of these cases do not get the characteristic tremor, and very often it is increased by intention, and in that respect it makes it difficult to diagnose if it is coming on slowly like that; but there is this about disseminated sclerosis—that they will bend the head forward and the tremor increases in magnitude. Then you get cases of choreiform or athetoid movement in a man of 50, and you may simply think he has arterial sclerosis, and you may account for it in that way. So that these late cases are extremely difficult to diagnose, and I fancy a great many of the cases that are called by other names are really cases of this disease undiagnosed. It is not a new disease. In the recent report which has been issued by the Ministry of Health they point out that probably this disease has been in existence for 300 years. Shortly after the epidemic of influenza in 1900 Oppenheim described a condition he called ponto-bulbar encephalitis. I saw a case the other day which I think must have been an acute case of this sort. He was a young man. He was quite well on the Friday. On the Monday I was asked to see him at a provincial hospital. He was in a semi-drowsy state, he had fever, and his fluid content showed very few lymphocytes. He had obvious difficulty in swallowing and he had Cheyne-Stokes breathing, and he died a few hours after I saw him. I think in each epidemic there will be found variations in the percentage of fatal cases from one-third up to two-thirds, and so on, and with regard to the chronic cases that arise it varies very much, from one-third to two-thirds. I think it is a very serious disease. We want now to find a cause. It is similar, it seems to me, to Heine Medin disease or epidemic poliomyelitis, and the source of infection in this disease is the naso-pharynx, but so far no organism has been discovered in either disease. It is probably a filtrable organism, but none the less an infective organism, although low in infectivity.

I am sure we are very grateful to Dr. Marshall, and I congratulate him on the excellent manner in which he has presented his paper. (Applause.)

Dr. C. H. BOND: I do not know whether I can add anything really worth listening to. As some of you already know, because you have been in receipt of communications from our Board, the Board of Control of England and Wales, we, in conjunction with the Board of Education in England and the Ministry of Health, have been keeping a very close watch and making inquiry into the incidence of encephalitis lethargica in the mental hospitals in England and Wales and in institutions for mental defectives. "Incidence" is not quite the correct word; I mean rather the number of secondary cases that exist in these institutions; and I am sure it would be of interest to the author of this admirable paper, Dr. Marshall, to know that the cases are far more numerous than he suggested from the report of Dr. Hall; I think 30 was mentioned as the number. There are nearly 100 in the mental hospitals, and that probably does not represent the real truth, and a less number in the institutions for mental defectives. So far as we can see the most difficult problem from the administration point of view is the younger cases—as to how they are to be dealt with, and as to their future. They have many points in common. I think I have heard of them developing characteristics of wickedness; tyrant and tease are terms that have been applied to them. Some such expressions really describe the characteristics of these previously well-behaved children, and the problem is great. Our present notion, after consultation with certain of the medical superintendents where the largest numbers of cases are, is to see if these cannot be concentrated in two or three institutions, with a view to making the best possible arrangements for study and treatment.

Another point I think Dr. Marshall mentioned was that there was a certain proportion of instances in which actual infection seemed to have occurred. So far as I can see from the returns the evidence of that is very small indeed. There is the instance—I think it was in Dr. McNalty's cases—where there were no less than 13 in one house or family, but an isolated instance of what looks like infection of that kind, plus the absence of it in so many, rather suggests

surely that there is some other explanation of a crop like that; and a single group like that is apt to raise the percentage of so-called infection very markedly. I wish I had brought the summary of the returns for England and Wales, which has been made by one of the Board's Inspectors, Dr. Evans. Unfortunately I have not got it with me, otherwise I think I could have given you some more facts of interest, but still, you will have it sooner or later. (Applause.)

Dr. MARSHALL: Sir Frederick Mott has paid me the compliment of asking me questions. With regard to the pathological findings of these *post-mortems*, they were done by Prof. Walmsley, the Professor here, and I had hoped to have some slides of the actual brains, but I am sorry I have not got them, and cannot therefore offer any comment about the question of hæmorrhage.

With regard to the theories about the cause of the lethargy I cannot say anything.

With regard to the cell-count, it averaged from 0 to a maximum of 36, but cell-counts up to 100 and 150 have been recorded, and I would remind you, Sir, that the earliest observers first thought that the characteristic findings were an increased cell-count, and then they decided it was not so typical.

I am tremendously interested in this question of the effect on children, and the question has arisen of the provision of special accommodation for children suffering from these moral perversities, as they are not suitable for ordinary mental hospitals and asylums, and unsuitable for home life and the playground and the street. I saw a child last Monday morning in the Ulster Hospital for Children—a little girl of 3, who had paralysis and obvious mental impairment. She was unable to sit up, unable to take her food, unable to recognize her mother, or a little more than that. Up to the age of 7 months she was a perfectly normal child, and then one Sunday she had convulsions all day. I think one must emphasize that the typical clinical appearance of acute encephalitis in infants is the occurrence of convulsions, and I diagnosed that, rightly or wrongly, as an attack of acute encephalitis lethargica occurring in an infant. I think that child is absolutely done for as a social unit.

With regard to what was said about the question of tremor and the Parkinsonian cases, Marie has published a tabular statement contrasting paralysis agitans with pseudo-Parkinsonism, stating that typical tremor is never seen in the latter. Dr. Gardner Robb, the Medical Superintendent of the Fever Hospital here, is present this afternoon, and some Sundays ago he and I were looking at a patient—one of this series of 42 of mine—who is now in an infirmary as a Parkinsonian, and we could not on clinical grounds, looking at the patient, distinguish between her tremor and the tremor of a Parkinsonian; so that point does not seem to arise. I did one or two cases on the method that had been suggested, but I found exactly the opposite results. It took rather long to do the cases, and I was not able to pursue it.

Sir FREDERICK MOTT: I should like to have asked whether you regard the increase of sugar as important in the diagnosis?

Dr. MARSHALL: Yes, I do, with this reservation, that I should like to have more knowledge of what happened as regards the sugar content in conditions of cerebral hæmorrhage.

Sir FREDERICK MOTT: Of course it is all gone in meningitis.

Dr. MARSHALL: That is the diagnostic difference between meningitis and encephalitis lethargica. I can only re-quote the Ministry of Health Report with regard to the other point—that while evidence of contagion is small, it is apparently very good so far as it goes; and Netter, of Paris, had an inquiry into this and found evidence of contagion more or less remote in 4.6 *per cent.* of the cases. Dr. Gardner Robb had recently under his care two sisters who had each got the disease within eight days. That is all one can say. I think from a social point of view the case of the children is the terrible thing.

Sir FREDERICK MOTT: Do you regard these late manifestations—the Parkinsonian, for example—as a sequela or continuation of the action of the poison? I think that is a fundamental question.

Dr. MARSHALL: That is very difficult to answer, Sir, I quoted this morning a boy who had an attack in 1920, and for three years and nine months had uninterrupted good health, and then developed it.

Sir FREDERICK MOTT: Is not that a case like syphilis?

Dr. MARSHALL: Yes, he is a parallel case.

Sir FREDERICK MOTT: That is what Netter says—it is a continuation process; further development.

Dr. MARSHALL: Yes. That remains to be seen. (Applause.)

Dr. GARDNER ROBB: Perhaps you would allow me to say, as many of your members are no doubt interested in seeing these cases in acute stages, that I have had over 200 of them in the last three months, and we have still a large number. I should be quite prepared to show these cases to anyone who cared to see them.

The PRESIDENT: I would just like to repeat our thanks to Dr. Marshall for the way in which he introduced this very interesting subject and elicited so much interesting matter from the other members. It is a disease which we shall probably hear a good deal of later on.

"The Therapeutic Action of Inoculation with Malaria," by Dr. W. M. McALISTER.

"Lilliputian Hallucinations, with Notes of a Case," by Dr. MARION ALEXANDER.

DEMONSTRATIONS.

By the kindness of Prof. WALMSLEY interesting demonstrations of pathological conditions and also of embryology and comparative anatomy were on view.

After tea the meeting adjourned until the following day.

ANNUAL DINNER.

The Annual Dinner of the Association was held in the Examination Hall of the Queen's University, Belfast, on July 3.

The opportunity of returning, in some measure, the fine hospitality extended to the Association on the occasion of their visit to Belfast was not neglected. There was a good attendance of members, and among the names of the distinguished guests could be found:

Moderator of the General Assembly; Rt. Hon. the Lord Chief Justice of Northern Ireland (Sir Denis Henry, Bart.); the Rt. Rev. Dr. Grierson, Lord Bishop of Down, Connor and Dromore; the Vice-Chancellor of Queen's University of Belfast (Mr. R. W. Livingstone); Sir Arthur Rose, D.S.O., Chairman of the General Board of Control for Scotland; Prof. R. J. Johnston, M.P.; Sir Wm. Whitla; Col. Fullerton, C.M.G.; Prof. Walmsley; Sir Ernest Clark, K.B.E.; Col. Forrest, C.B., C.M.G.; Prof. Lindsay; Mr. W. C. Gage; Gen. Solicitor for Minors and Lunatics; Col. Meek; Mr. T. B. Wallace, Acting Registrar in Lunacy; Mr. J. H. Stirling; Mr. S. Watt, C.B., C.B.E.; Mr. A. P. Magill, C.B.; Dr. T. M. Tate; Dr. McIlwaine; Major Harris, D.S.O., O.B.E.; Mr. John Campbell, F.R.C.S.; Dr. McKisack; Dr. N. C. Patrick; Mr. James Smith.

The Right Hon. the Lord Chief Justice of the Irish Free State (Hugh Kennedy, Esq.) was absent, much to his regret, as the following letter shows:

DEAR DR. NOLAN,—I am writing to express my inability to be present at the Queen's University on Thursday. I put off giving a definite reply until the last minute in the hope that I might be able to enjoy your hospitality, and to have the benefit of your introduction to the leaders of thought in this great branch of humanitarian science, which must for the future be one of my practical and real interests.

I have to thank you very sincerely for your kind consideration to me.

Wishing your period of office as President of the Association every success, and hoping to meet you soon,

Believe me, Dear Dr. Nolan,

Very sincerely yours,

HUGH KENNEDY,

Chief Justice.

The President (Dr. M. J. Nolan) presided.

THE TOASTS.

"THE KING."

The customary loyal toasts were pledged with acclamation.

"HIS GRACE THE GOVERNOR, AND PROSPERITY TO NORTHERN IRELAND."

The PRESIDENT: The first part of this toast is so akin to the sentiment of those which have preceded it that I am sure you will receive it with equal cordiality and enthusiasm.

Since his advent to the North, His Grace the Governor has been particularly sympathetic with everything appertaining to its philanthropic institutions. I am free, in a sense, by his regrettable absence to-night, to say perhaps more about him than one would if he were here. When he heard of the Association meeting here, His Grace expressed himself in a very kindly manner about it, and would have been one of your hosts if he had been in the country at this time.

The prosperity of Northern Ireland is a sentiment which must, naturally, commend itself to all of us. (Hear, hear.) The Prosperity of Northern Ireland is not meant in any sense as compared or opposed to other parts of Ireland, but being an integral part of the country its prosperity is essential to the whole. Whatever differences there may be in regard to boundaries, permanent or otherwise, the prosperity of the North must always be to all of us here, who are living under its ægis, a matter of the greatest importance. It may be that in time other considerations may operate, but just at present we, as an Association, are concerned with our membership in all Ireland. It may be that in time a condition may arise when each section will show its full capabilities for government; then there may be an approximation; but we, as an Association, feel that in any event much depends on the prosperity of the country as a whole. We have a very particular interest in its success. The condition of our institutions of the North reflects considerable credit on the authorities in control. I am quite sure that if this northern area becomes even more prosperous than it is, the prosperity would be reflected upon those institutions. I do not think I need labour the toast. It is one which must commend itself to you all.

In the regrettable absence of the Minister of Home Affairs I will call upon Sir Ernest Clark.

Sir ERNEST CLARK (in replying) said: I have, first, to thank the President for the felicitous terms in which he has proposed this toast. I was originally put down to reply on behalf of the Visitors, and I think I may take a little bit out of that speech to thank him for the entertainment that the members of the service have received at the hands of this Association. It is most unfortunate that a mere official should have to reply on behalf of the Governor, because a mere official knows nothing whatever of the Government or its policy! (Laughter.)

When I heard the Association was to be here I looked up some definitions. I knew that the members of the Association had, unfortunately, to deal with the insane, and I looked up the definition of "idiot," and I find that the word is derived from a Greek word which means a person in private life as distinguished from one occupying an official position, and when I read that I was comforted. (Laughter.)

Now your appreciation of the Northern Government is one we shall value. The members of this Association in their ordinary life, and in their ordinary work, have a difficult row to hoe, and this Government will have a difficult row to hoe. Four years ago I saw several of the asylums in this Province, and I was struck by the difficulty of the task the members of the Association would have when I realized the utter lack of sympathy on the part of the public with regard to the insane. I never realized until I went over the various institutions in this Province how difficult the task of the officials is.

An American writer said there is a great deal of humanity in the ordinary man, but there is also a great deal of humanity in the insane. (Hear, hear.) When the official gets no help from the outside and has to supply all that humanity himself, he is faced with a very difficult task. The members of this Association successfully carry through their duties in exercising that part of

their lives which brings the unfortunate insane in touch with the outside world. I am not pretending, of course, that there is any analogy between their work and the work of the Government here, but the work of the Government has been an uphill task, and I feel it would be a very great thing if the members of this Association who come from the other side of the Channel carry away from this part of Ireland an appreciation of some of the difficulties that we have to encounter. I am not speaking as an Ulster man; unfortunately I never can claim that birthright. I am speaking broadly, as an Englishman, with his impressions of the North of Ireland, and I hope all of you who have come here will go away impressed with your view of the North of Ireland. It is an extraordinary thing that the ordinary Englishman does not really understand anything about the Irish question. He does not understand the difference between the North and the South, and he wonders why all this trouble and bother is made over here, but when he comes across here he generally learns something. When you go back I would like you to carry with you some idea of what the Government of this country has done.

I do not speak to-night with a brief on behalf of the Government. I have to do that occasionally, but what I would like you to remember is that this province, in spite of its difficulties, in spite of the fact that in two and a half years it has had to bring order out of chaos, in that time has contributed thirteen millions of money towards the finances of the British Empire. (Hear, hear.) Of course, I think that is a most important thing because I happen to be in the Treasury. If I was speaking from the Home Office I should tell you that, at the same time, this Government has suppressed crime, and in place of the high peak of seventy murders in one month, in a population of a million and a quarter, which will strike you who come from the other side as being extraordinary, we are at normal. There is no more murder, and no more crime, in the North of Ireland than there is in Great Britain. (Applause.) Of course, we may have our difficulties ahead—I believe there is such a thing as a boundary which has to be settled by somebody, and I believe there is somebody in Belfast at the present moment who hopes to settle it. Of course, we all hope that it will be settled, and we hope it will be settled in the way we would like it to be settled. (Laughter.)

Now, Mr. President, I thank you for the terms in which you proposed this toast, and on behalf of the Northern Government, which I unworthily represent, and on behalf of the Governor, whom I still more unworthily, and at a much greater distance, represent, I wish you in your term of office every prosperity. (Applause.)

"THE QUEEN'S UNIVERSITY OF BELFAST."

Sir FREDERICK MOTT: I have been called upon to propose the next toast, "The Queen's University of Belfast," in the absence of Lieut.-Col. E. Goodall, our Past President.

I feel greatly honoured in proposing this toast, and I call to mind the fact that when William of Orange rode into Leyden after the siege he asked whether they would prefer a university or freedom from taxation, and they chose a university, which showed the wisdom both of William of Orange and the citizens of Leyden.

You have a University, and you are not free from taxation, but I hope that will not discourage you in supporting this University to the best of your ability. I have been interested very much in this visit to Northern Ireland, because my sympathies, as I said, are mainly with the people of Ulster and with what they have done in the past, and their loyalty to England. But I wish to speak to-night particularly from my own point of view as a pathologist. Perhaps I shall encourage the Belfast people to support a movement which is taking place in England. A little while ago an article appeared in *The Times*, "Birmingham leads the way." Well, I want to tell you what Birmingham has done, in the hope that it will encourage you to do likewise. Birmingham realized that the proper thing to do was to try and find out how to prevent insanity, and if unable to prevent it, to cure cases as soon as possible. Therefore the Corporation of Birmingham became associated with the University in establishing a Research Board, and on this Research Board there are four representatives of the University, with Sir Gilbert Barling as Chairman, and four

representatives of the Corporation. A sum of money was provided to build a laboratory for undertaking research work, and for investigating, by hospital methods, the cases that were admitted to the mental hospital. You have a very fine mental hospital here at Purdysburn, where we went yesterday, and I would like to see a hospital outside the grounds of Purdysburn, but connected with it, and associated with your General Hospital in Belfast. (Hear, hear.) It should have a clinic there—do not call it a mental clinic, because if you do, people will not come, because they do not like the word "mental" at all. The object is to get them as early as possible, because many of them, then, are in a curable stage, and if you wait until they become chronic you cannot do very much, and, indeed, they will not come to a hospital if they know it is only half-way to an asylum, or certification. Their great fear is of being certified as lunatics, and it is very right too. During the war it was wisely instituted that no soldier should be sent to an asylum until it was found out that he was incurable, and in that way a great many received early treatment and were saved from going to an asylum. I can conceive nothing more dreadful than for a man to be taken to an asylum feeling he will never get out of it. I can speak from my own experience. I saw a gentleman not so long ago who was very bad indeed. He was the manager of a very large company, and a very clever man. He had marked delusions and refused all food. His family were very anxious he should not be sent away. I said, "No, it is not necessary. You can treat him in your own house, provided you have two attendants and a doctor." The doctor came twice a day and fed him with a tube. That man, at the end of a month, was well. He came to my house in London on his way to Eastbourne, and he was back again at business in three months. If he had gone into the asylum he would have known perfectly well he was there, he would have had the fear that he was never going to get out, and if he had not got very considerably worse I should have been surprised. Those are the sort of cases that should be taken early and given a chance, and there is no reason why it should not be so.

There is another thing one would like to do, and that is to try and find out whether there is any bodily condition that is instrumental in bringing on the attack in a person who is predisposed. There is some hereditary disposition, I think, in the majority of cases, and we know perfectly well by looking at the stock of the family you very often see genius mixed up with insanity, and it is just a chance of circumstance, very often, whether the man will become a genius or whether he will become insane. Now that is a totally different thing from the imbecile. The high-grade imbecile is a danger to the community, but many cases of psychosis really occur in very able people, so that we ought to do all we can to treat these cases in the early stages. What I would like to see would be a hospital connected with the general hospital, because you cannot take them into the ward of a hospital. They must have a hospital where there are grounds, so that they can have daily exercise, and treatment according to hospital methods. Now what do I mean by "hospital methods"? At the general hospital you have specialists in all branches of medicine, and each case would be placed under a specialist, or be examined by a specialist if the doctor thought it necessary. We find at Birmingham a large proportion of the cases that come into the mental hospitals are suffering from chronic sepsis, and by the removal of the sepsis we hope they will be discharged much earlier and remain much longer out of the asylum. So that from the economic point of view it is a good proposition that I am putting forward to you, because I think you will save money in the end. It is better to pay £5 a week for a person for a few weeks, or a few months, than to pay £2 or 30s. a week for two or three years, and even if you only cure a certain proportion, I am sure, from the economic point of view, that will appeal to the ratepayer most.

Another good thing we have established in England is this association with the university, because having the professors of the university is a great advantage. I will just give you one instance, and that is Prof. Haldane. Prof. Haldane is a professor of mining. I wanted to do some experiments to see the metabolism of patients who were suffering from a certain form of mental disease. I said to Prof. Haldane, "I want to see your respiration chamber." He showed it to me, and he came down and advised me what to do. If I get into difficulties with a chemical problem I go to the chemist and I get information from him.

You want to correlate all these, and that is the great advantage to a town of a university, and I want the town to make use of it.

Another point is this. At Birmingham every medical officer in the service with which I am connected has a London University Diploma in Psychological Medicine. I think that is a valuable thing, because when these young doctors have been trained in psychological medicine they can see interesting problems all around them, whereas before they studied the subject they did not see any interesting problems. I recommend to your University the establishment of an association in connection with the University and the city hospitals, and, if possible, the establishment of a Diploma of Psychological Medicine in this University.

You send many very distinguished men over to England, and I am perfectly sure this Medical School would take a high place in psychological medicine if you would take it up. I believe you have in your Vice-Chancellor a man who is very sympathetic towards the movement, and who takes a great interest in medicine, and I congratulate you on the good fortune you have had in having him as your Vice-Chancellor. (Applause.) I have had the great privilege of staying with the Vice-Chancellor. I have had many conversations with him, and I was particularly struck with his feelings towards medicine, and with his interest in the subject and knowledge of the subject too. I think that, very probably, you will find that the Vice-Chancellor will support this movement, and do all he can to adopt some of the principles which I have laid before you, and which, I believe, will be a great success in Birmingham. Moreover, I should like to say that Dr. Bond, who is here to-night, was one of the strongest supporters of this idea and has always supported it, and I do not think the public realize sufficiently how much they owe to Dr. Bond in regard to that. (Applause.)

I should also like to say that my friend, Dr. Chambers, has been a great asset to us in England, and to this Society. (Applause.) I am sure everybody who knows Dr. Chambers will agree with me that he is one of the most charming men possible, and one of the best physicians in his part of the country.

I have very much pleasure in proposing the toast of "The Queen's University, Belfast," and I couple with it the names of the Vice-Chancellor, Prof. Symmers and Mr. T. Sinclair. (Applause.)

Mr. R. W. LIVINGSTONE, the Vice-Chancellor of the University, replying, said: I have great pleasure in rising to thank Sir Frederick Mott for the very kind way in which he has proposed this toast, and you for the way in which you have honoured it. It is a great pleasure to welcome this Association here, because the biggest faculty in the University is the medical faculty, numbering between five and six hundred students, and being, I think I am right in saying, the biggest medical faculty in Ireland. Personally it is a great pleasure for me, and if I had to lead my life again, I would most certainly lead it the second time as a doctor.

It is a great pleasure to welcome the Association as representing a profession against which, I think, the human race has only one complaint which can be reasonably made, and that is that it has prolonged the expectation of human life. (Laughter.) It is particularly pleasant to welcome the branch of it which has, in recent years, made very great advances, which, in the future, may make advances greater still, and which has managed in so many cases to put the hand back on the dial where, a generation ago, it would have been generally held that it was irrevocably passed.

There is another thing which we here in the University, and, perhaps I may say, in Belfast, generally owe to the Association, and that is that they bring us stimulus. They bring us the stimulus of a speech like that to which we have just listened, the stimulus of fertile suggestions, and they bring us a stimulus which no amount of books can bring—that which comes from individual association and from personal conversation. Socrates used to complain of people who made long speeches. He said that he had a bad memory, and that by the time the speaker had finished his speech, he could not remember what he had said at the beginning of it, and he held that, at any rate in philosophy, the only way to advance was by mouth-to-mouth conversation—by what you may describe as intellectual tennis—and that is very much what a body like this Association has brought us. I am sure that Socrates would have been delighted with its activities. He might have been surprised, perhaps, that the meetings

were not held in the market place, which, I suppose, would have been under the shadows of the statues round the City Hall, and he might, perhaps, have skipped some of the papers on his own principles too. But I am sure he would have missed none of the discussions and none of the symposia in the evenings. Just for that reason, because they have a stimulus which one cannot get out of books, I cannot help feeling that that stimulus is particularly valuable to us in the North of Ireland. We are a little more remote from the centre of things than parallel institutions in Britain. The sea keeps us off, and the railway fares keep us off still more, although I think we gain, in some ways, a great deal. I think we escape that devastating unification of the human race which is proceeding under so many influences—influences as different as increased facilities of communication, broadcasting, and the ubiquity of the *Daily Mail*—and I think the result is that you will find in Belfast (I am only speaking as a newcomer, and perhaps I ought not to speak at all) a more intense and vivid individuality than you would find in Cardiff, or Glasgow, or Birmingham, or, least of all, in that great port where every kind of ingredient seethes, and where there are so many flavours that you can hardly perceive any flavour at all—I mean London. Yet intellectual stimulus, and the sort of stimulus which this Association has brought us, is absolutely necessary if there is to be any keen intellectual life in any learned profession like the medical profession or in any University. We are grateful to you for having brought it to our doors. (Applause.)

Prof. SYMMERS: Some few days ago in London a certain coroner held an inquest, the circumstances of which were briefly as follows. A very distinguished gentleman had given an after-dinner speech, at the conclusion of which he suddenly fell dead. The verdict brought in was "death from natural causes!" I am sorry, Sir, that this particular kind of death does not oftener take place. Can anything be more unfortunate than to ask a man to come to a charming dinner party such as you have to-night, and then hold over him the Damocles sword of an after-dinner speech? Why cannot we die before we begin?

Now, Sir, we welcome to Belfast and to this institution a number of distinguished representatives of a famous scientific society. I wonder with what views they come to Ireland—a country of all sorts of quaint superstitions. If you will bear with me for two minutes—I am physically incapable of speaking more than ten, so you need not be afraid—I will refer to one of the superstitions that we have in this part of Ireland, and that is that all gentlemen who, like our guests to-night, are engaged in the study of mental diseases, themselves become slightly touched! We had in this room last night an extraordinarily interesting meeting, at which most of you gentlemen were present. Going home a young lady who had been present—voiced this Northern superstition of ours—that all asylum men themselves become a bit dotty. She said to me: "How is it that there was so much charm among all those doctors?" That is the reputation you have got, you see. I believe yesterday morning when you came to this place you had some difficulty in finding it. You did not know what meetings you were going to hold, and at what time you were going to hold them. (Laughter.) That I think you put down to the idealistic Celtic intelligence! Everything is explained by saying you are in Ireland. Time is of no importance; nothing is of any importance. The average Irishman is a poetically inclined idiot—irresponsible! (Laughter.) You come over here and you arrive at Queen's University, and you find a room to hold your *séances* at. (Laughter.) You are not expected, and you put that down to the idealistic character of the Irishman. He is a happy-go-lucky individual and does not care a damn about anything! But you know when you come over to Ireland we expect you to be men, and you have to look after yourselves. You want to arrange the time of your own meetings. Do not put it down to the idealistic romantic innocence of the Irish! (Laughter.)

Now about you all being dotty. I am sure you are! I have been trying to investigate that point. There is a celebrated family in the North of Ireland, the Grahams. I made acquaintance with them some 15 or 18 years ago, and I have been trying to find out whether their association with the asylums would ever bring about lunacy in the family. There are two of them in this room to-night. There is one along here. I have been watching him for the last

five or six years, and he will not go crazy ; he simply will not do it. The nearest approach to lunacy that I have come across in a man who has spent his life in contact with it is your President, Dr. Nolan. I will explain my point. He came to me some four or five days ago and he brought up a brain of a patient of his—he generally gets a brain with a patient—(Laughter),—and he said, " Now this is a case of what Prof. Mott calls infantile general paralysis. You will kindly get up and demonstrate this at our meeting in a week or two " ! I looked at it and I said to myself : " That is the first time I have ever seen the Governor of a great asylum approaching insanity ! " (Laughter.)

I have nothing further to say except to thank you for the nice things you have said about the Queen's University, and to beg you to believe that our Medico-Psychological friends really are intelligent people. There is only one thing in this world that they cannot do. None of those gentlemen can in future certify a lunatic ! (Applause.)

" THE VISITORS."

Lt.-Col. W. R. DAWSON : The toast which has been entrusted to me is one which is drunk by this Association on all occasions with an enthusiasm second only to that with which we drink that of " His Majesty the King." It is that of the gentlemen and ladies who have honoured us, and have so greatly increased our pleasure this evening by joining us at Dinner—" The Visitors."

Now I hold that we are extremely fortunate, because we have a particularly representative collection, if I may say so, of visitors with us to-night. There are very few of the interests of life in this city—in fact in the country—which are not represented, and the difficulty which I have had is in selecting from so many distinguished people who have honoured us by coming here to-night a few to mention as representatives of their various classes.

Of course the churches always come first, and here to-night we have the Moderator of the General Assembly—(Applause)—of the Presbyterian Church in Ireland, who represents so large a body in this city in particular, and all over the North of Ireland, as well as in other parts, and we have the Rt. Rev. the Lord Bishop of Down, Connor and Dromore, successor to Bishop Jeremy Taylor, so far as Dromore is concerned. (Applause.) Now it is very appropriate, I think, that the churches should be represented at our Dinner, because there is more or less, particularly of late, a *rapprochement* between psychology and religion or theology. We have heard a great deal of late of spiritual healing, and no doubt everyone would explain that in his own way, but however it may be explained, there is, in my mind, no doubt that such a thing exists. Then to come down to more concrete matters, we have in connection with our asylums a very important class of officials—the asylum chaplains—and I have no doubt they do a great deal of good. It has always seemed to me that if the clergy, as part of their curriculum, had to go through a course of medical psychology, it would be a great deal to their benefit, and I am perfectly certain the asylum chaplains would be enabled to do a great deal for their patients—even more than many of them do at present. I may perhaps touch on another way in which there may be a connection between theology and medical psychology. A friend of ours had a large private asylum in the south of England, and amongst the patients in this asylum there was a clergyman, who had recovered, but did not feel quite the same confidence in himself as he had before, and decided to stay a little longer. Of course he was allowed a great deal of liberty, and he went in and out very much as he liked. On one occasion he prolonged his walk a little further than usual, and came to a church where a service was obviously about to be held. He went in and sat down, and the rector of the church asked him if he would read the service. He said, " I will, and I will preach for you if you like." The rector accepted with enthusiasm, and the clergyman not only read the service, but preached an excellent sermon. Afterwards in the vestry the rector said, " Where are you staying in this neighbourhood ? " " Oh," said the clergyman, " I am staying at such and such a place," mentioning the asylum. " Oh," said the rector, " Aren't the people funny there ? " He said, " Yes, they are all more or less insane. I am a patient." The rector said, " I wish you would bite my curates ! " (Laughter.)

The Law is represented here by the highest authority in Northern Ireland, the Rt. Hon. the Lord Chief Justice—(Applause),—and I think I may safely say

out of a very strong and very popular Bench—because we are very fortunate in Northern Ireland in that respect—he is the most popular of them all. (Applause.) Perhaps I may mention that I first came in official contact with the Lord Chief Justice years ago at an inquiry at which a very strong Bar attended, and afterwards I said that if I were ever so unfortunate as to need the services of a Senior Counsel I should wish to have Mr. Dennis Henry. Now, I hope more strongly than ever that I shall never have such a need, as I could not get him.

Then we come to the gentlemen from across the water, whom we are very pleased to welcome here. We have Sir Arthur Rose—(Applause),—who appeals to us in two ways. First of all, as Chairman of the Board of Control of Scotland, in which capacity he does excellent work—and may I say that although they are not visitors in one sense, because they are members of the Association, we are very glad indeed to see not only Sir Arthur Rose, but his colleague, Dr. Marr, one of the Commissioners, and our friend, Dr. Bond, one of the Commissioners of the English Board of Control. (Applause.) Sir Arthur Rose appeals to us not only in this way, but also in another respect, and that is in his magnificent service during the war. (Applause.) I can assure him that nowhere in all this far-flung Empire is good war service more thoroughly appreciated than it is here in Northern Ireland. We have learned that appreciation in blood and tears on the field of the Somme, eight years ago almost to the day.

The Vice-Chancellor we have already heard, and we are delighted to see him here—which perhaps is not very wonderful on his part, seeing that it is his own ground, and that the obligations are all the other way, because we have been receiving the most extraordinary hospitality and kindness in this University. In connection with the University, may I say how much we owe to the Secretary, Mr. Finegan, who has done more work for us than we can easily appreciate? Mr. Finegan is indeed what we might call “the power behind the throne” in these matters.

Then, as representing the great commercial fraternity in Belfast, we have Mr. Stirling, who is not content with running the largest concern of its class in the world, but finds further outlets for his exuberant energy in serving on the Senate of the University, assisting in the registration of dentists, and in a number of other equally useful and equally honourable ways assisting in the life of Belfast.

Representing the official class we have Sir Ernest Clark. Sir Ernest Clark has dwelt somewhat upon the unpopularity of his position, but I can assure him he is a man with whom we all particularly like to stand well. I spoke of the power behind the throne, but Sir Ernest Clark is the power behind the purse, which is, if possible, even more important.

Last, but not by any means least, we have as representative of the general medical profession in Belfast a man who is well known far beyond the limits of Ireland—in fact beyond the limits of Great Britain—and that is Sir William Whitla—(Applause),—who is the *doyen* of the profession in Belfast, and whose books, with which no doubt you are all thoroughly well acquainted, have done so much to alleviate suffering, and also in another direction to mitigate the unpleasantness of the medicines which those who are suffering have to take.

Those are all that I intend to mention to-night. If I have not mentioned others it is not because we have not many distinguished people here who might be mentioned, but because the hour grows late, and because I think these may be taken as fairly representative of our guests this evening. I have not said anything about the ladies. We have not yet called upon any lady to respond. I think that is a mistake, because I think they respond very much better than any of the men.

I ask you to raise your glasses and drink to the health of our visitors, coupling with the toast the names of the Rt. Rev. the Lord Bishop of Down, the Rt. Hon. the Lord Chief Justice, and Sir Arthur Rose. (Applause.)

The Lord Bishop of Down, in replying, said: I feel it an honour to be asked to respond to the kind resolution which has been proposed here to-night by Col. Dawson, and in doing so may I say how very honoured we all feel for the entertainment you have so kindly given us to-night, and how we do wish you success for the great Association to which you belong. Col. Dawson mentioned in his remarks the connection that existed between medicine and religion, and I may say that that is a thought which has been very often, and necessarily so,

in one's own mind in the years of one's ministry. Perhaps our happiest friendships have been with our doctor friends. We meet them much, necessarily, in our own work, and we feel that there is a very, very deep relationship between the provinces of life in which we work. It has often struck me that a very interesting study would be to trace the relationship that has existed from times immemorial between religion and medicine. You might go back to the most primitive stage of man's development, and probably there you would find the two identical. You would find primitive man, with his superstitions, undoubtedly imputing all illness to the gods, and following that, relief from illness could only be got from the same gods that imposed it. Then if you pass down, I think you will find the two separating to a great extent. I think they ought never to be too much separated, but you do find them separating. I am speaking here to those who know so much better than I do the history of medicine, but I would say that in studying the origins of one's own province and profession in life one does come across a good deal of the origins of medicine. Of late I have been very interested in discovering what you yourselves doubtless know very well—that in the very early ages of the Christian faith, in the second century or so, there was a great revival of the worship of God, and there again religion and medicine seem to be almost identified, and I cannot help feeling that to-day again we are drawing extraordinarily near to each other. No doubt psychology is an old thing to many of you. There has always been a certain amount of it, I doubt not, in training the medical profession, but undoubtedly psychology to-day is in new stages. It is really a new science in these days, and I think our two professions, if I may say it, touch very closely there. Once you get into that region you get into the region of great mystery, and very often I feel I would like my theological side to get into touch with some of you learned gentlemen of this very Association to which you belong, that you might be able to clear my own mind and help me in the difficulties that face me on my side. There is no doubt in my mind that religious peace would help to fill the reservoir of vital force of which you doctors so largely spend, if I may say that, so that the two are allied.

I thank you, Mr. President, if I may, in the name of the guests here to-night. I thank you for your splendid entertainment, and for the pleasure of your company. As I have said, our two professions are nearly allied, and I hope they may be growing closer and closer as the days pass. (Applause.)

THE LORD CHIEF JUSTICE: I feel in the most embarrassing position in following the Lord Bishop. Usually in my experience the Lord Bishop has the last word, and when he has finished I prepare for something quite different from a speech, but upon this occasion I suppose in the capacity of Devil's Advocate I am selected to follow in the footsteps of the Lord Bishop of Down. Well, on behalf of myself—and I am sure I speak for the other visitors—we have had an extremely pleasant evening, and it has been a source of great pleasure indeed to have had the opportunity of meeting so many gentlemen distinguished in their profession. When one thinks of the change that has been made in the eighty-three years of the existence of your Society, it is a marvel. When I go to medical or surgical dinners I spend the time in congratulating you on the advance that has been made from time to time by the various branches of your profession. My own profession has advanced very little, but the bill of costs is always the same! (Laughter.) It is to me a very great pleasure indeed to be here and to meet the distinguished gentlemen who represent a very important branch of the medical profession. Perhaps in no branch of it has such progress been made, and perhaps no branch demands such patience, tact and temper as is demanded from the superintendent of one of the great institutions erected by the State for the benefit of the unfortunate people who have been stricken by Providence. You have risen to the occasion; you have made great progress. With regard to these meetings, you are better able to judge than I am, but even as a layman I can realize the advantage of a number of distinguished gentlemen coming together and comparing notes, and inspecting from year to year the different great institutions throughout the country, and profiting from their experience.

There is another aspect of your Society I would like to say a word about, having some little, though not very much experience, and that is, the great benefit you have conferred upon the insane poor by the establishment of the

splendid system of attendants that obtains in all asylums. You make them pass examinations and issue certificates to them. It is impossible, even with the greatest attention, that the doctors of these institutions can be there all the time, but you have established a scheme of examinations and produced a number of men who are trained in the strictest way, and who treat, as I believe, the poor people under their control with the greatest attention and care. That is of itself almost more than you have done in the higher ranks of the profession, because the attendant is always with the insane. (Applause.)

I hope you have enjoyed your visit to the North of Ireland. We do not altogether depend here upon our charms; we bring our works to our assistance, but I hope the combination will recommend itself to you, and that you depart with a better feeling and a better idea of us than you had upon your arrival. (Applause.)

Sir ARTHUR ROSE: I appeal to your sympathy in the situation in which I find myself at this late hour. I feel you will understand me glancing for a moment at the toast list when you see that a humble man like myself is coupled with the names of two such distinguished gentlemen as have just spoken. I think you must further sympathize with me when you realize I belong to that race which Prof. Symmers has described as practically unamenable to reason, or words to that effect. Finally I must also again refer to Prof. Symmers, when I say I am classified as being "dotty." Now, Sir, with regard to the last, I feel that I have a certain measure of safety. This Society did me the great honour of making me an honorary member last year, and I think I may therefore claim that my dottiness is of an honorary nature. (Laughter.)

May I say, Sir, what a stimulus this meeting has been to me. I had the pleasure of sitting this morning and this afternoon listening to most interesting and valuable papers being read and discussed. I frankly confess as a layman that a great deal of what was said was beyond my understanding. On the other hand, the appeal that it made to me was that the members of this Association, who after all are the members of the profession dealing with the subject with which I am particularly interested, were definitely progressing, and putting forth a vision of progress which I think is so extraordinarily vital in this work in which we are all engaged. I think it is up to men like myself to do what we can in influencing the minds of the authorities who have the control of the great establishments that we look after, to get them on their side and to get some measure of this vision into their heads, so that they will support their medical superintendents in really curative and scientific progress throughout the country.

Finally, may I thank Col. Dawson for his very kind words about me personally, and may I just say this. He has mentioned that terrible incident of the Somme in 1916. I had the honour to fight for quite a long time along with the Division, and I never was privileged to see troops carrying out their work with more dash and courage than I saw then. I thank you very much. (Applause.)

"THE MEDICO-PSYCHOLOGICAL ASSOCIATION."

Prof. LINDSAY: We have reached the last toast upon our list, but I am sure you will all agree it is not the last in importance, and although the hour draws late, I will try and do it some justice. I have great pleasure in submitting to you the toast of "The Medico-Psychological Association of Great Britain and Ireland," associated with the name of the President, Dr. Nolan. I am sure the medical profession regard their visit to Belfast as a great compliment, and we sincerely hope that their meeting here will realize all their best expectations, and will leave pleasant and enduring memories. We sometimes complain that our English and Scots friends do not come often enough to Northern Ireland, and we assure them we wish they would come oftener; they would always be heartily welcomed. Ireland, I think, has some reputation for hospitality, and I sincerely hope that your experience here at this meeting will not invalidate that verdict. We know something of the record of this Association's eighty-three years. We know something about the greatness of the results it has produced. We know something of these gentlemen's contributions to medical science. We know something of their work in the endeavour to prevent or cure or alleviate some of the worst evils that can befall humanity. We know enough of the Association to treat its members with respect. None of us can tell when the day may come when we might need their kind attention.

We were reminded yesterday by the Lord Mayor that at a recent and somewhat famous trial, one of your members said that he would not give a certificate of sanity to any man. I do not know whether he used the word "man" in the masculine gender or the feminine gender, or maybe he made reservations with regard to the female sex. That is a matter that perhaps some of the members of the Association might consult their wives about! (Laughter.)

Now, Sir, I think we all agree that medical science is essentially a humane science, and I am not sure that any department of medicine is more competent to deal with such matters as your Association deals with. There was a time when the insane person was regarded simply as a dangerous person—a person against whom society needed to be protected; his own interests were entirely sunk. Now there is a totally different interpretation. It is now the interests of the patient that are considered. Your methods of treatment are humane as far as is possible. The environment of the patient, his home life, his recreations and sometimes his work are run upon lines absolutely and completely humane. Belfast, I may tell some of our visitors, was originally an English settlement; later the Scotsmen preponderated. We were very glad, Sir, to see that Scotland was well represented at this meeting. (Hear, hear.) I want to remind our friends from Scotland that on coming to the North of Ireland they are coming to their ancestral home.

Now on Saturday next our friends will have an opportunity of seeing something of the scenery of our Province. Ireland has been compared to a dull picture in a beautiful frame. Now our central plain does not present much interest to the lover of the beautiful, but our coast almost everywhere is beautiful and romantic, and on Saturday I hope you will have beautiful weather, and some opportunity of seeing all the most interesting regions of Northern Ireland. There is an interesting matter I would like to mention. If our visitors will cast their eyes over the river and see the hills beyond the river, they are looking upon the sanest county in Ireland. It is a significant fact that County Down has only about half the proportion of insanity to that of the other part of this country. That is the county that has the advantage of the services of your President. Whether there is any causal relation between these two facts or not I am not prepared to say, but it is a very interesting point.

Now I have to associate with this toast the name of Dr. Nolan. Allow me to tell our visitors what I think they probably know—that he enjoys in a very high degree the regard and affection of his colleagues in Northern Ireland—(Hear, hear)—and he enjoys the honourable regard and affection of a very much larger and wider circle. Let me express the cordial hope that he will have a most successful year of office, and that he will cherish a very great tradition, and I will express the belief that that tradition he will honourably uphold. I will ask you to drink the toast of the "Medico-Psychological Association of Great Britain and Ireland," coupling with it the name of the President, Dr. Nolan.

Dr. NOLAN: I cannot say how much I thank you for your cordial vote to the Association and for your personal remarks about myself. The Association has I think owed much of the vitality of its existence to the cordial manner in which this toast has always been proposed, and I do not think I have for many years heard it proposed so cordially as it has been by Prof. Lindsay. Prof. Lindsay himself has been a practical friend to the aims and objects of the Association in the position he occupies, and there is a power, too, in his opinion on many things connected with the special objects of our Association.

There is just one remark he made with regard to statistics of insanity, to which I should like to refer. The statistics of insanity are perhaps the worst example of any statistics in the world. Even the best of statistics are not always reliable, but in the statistics of insanity there are particular circumstances sometimes that work out badly. In this particular instance, we are always shown up as the most insane nation compared with England and Scotland, and it is quite easy of explanation. In the other countries adjoining there are several institutions for different forms of mental affliction—for the weak-minded and senile and other classes. In Ireland the only institution is the district asylum of the locality, and into that institution all these classes come, and are certified and registered as such, and consequently we get an undue amount of insanity put down against us. On the other side of the water Prof. Robertson and his

colleagues very properly have a method of intercepting people and recovering them before they get through the doors of an asylum, and in England also there are various forms of institutions in which certificates are not required, but in this country we have no such desirable means of reducing our returns of insanity.

Now at this late hour we will not discuss statistics further, but I would, on behalf of the Association, thank you very much for your appreciation of our efforts and our aims. (Applause.)

MORNING SESSION—FRIDAY, JULY 4.

At Downpatrick Asylum.

The PRESIDENT in the Chair.

PAPERS.

"Is Dementia Præcox a Definite Clinical Entity?" By Prof. G. M. ROBERTSON (see p. 529).

The PRESIDENT: I am sure we all feel exceedingly grateful to Prof. Robertson for treating this subject of dementia præcox in such an exhaustive manner. It is a paper that essentially appeals to me, inasmuch as when I first entered the asylum service at the Richmond Asylum, Kraepelin was not so well known as he is now. The katatonic was the particular type that we were interested in, and of course in later years we reached the subdivisions and we came to the paraphrenia, which was one of the recent varieties. I only mention this because we have such excellent authorities on the subject here to-day, and I am sure you would like to discuss it among yourselves. Perhaps Sir Frederick Mott would tell us something?

Sir FREDERICK MOTT: I have listened to Prof. Robertson's address with great interest, as I always do, because he is so very illuminating, and I think he has placed the whole subject before us in a very comprehensive and satisfactory manner.

I do not think it is generally known—it was pointed out to me by Dr. Maudsley—that Morel called the disease "Démence Précoce," and figured the katatonic condition that is reproduced in Regis's text-book, so that it was not any new idea to call this form of insanity occurring in adolescents "dementia præcox." I think the point which is of very great interest to me is the fact that a number of patients undoubtedly in childhood show signs that they will develop into cases of dementia præcox later in life, and that is a point of great practical importance to a country like Canada. The late Dr. C. K. Clarke was staying with me when he gave the Maudsley Lecture, and he told me that he took particular care to inquire regarding the children of the emigrants to Canada, and if there were any signs in the children of the possibility of their developing dementia præcox in adolescence, then he would not permit of them coming into the country; and I think that was a very wise provision on the part of the Canadian Government.

I quite agree with Dr. Robertson with regard to the attitude which he has taken up in respect of this disease. I think until you have watched a case for some time it is extremely difficult to decide whether that case is going to recover or not, and it is only by taking a view of the longitudinal section instead of the transverse section of the disease—I cannot help speaking as a pathologist—that you get a fair view of what is the prognosis. I think in that respect Kraepelin did a very great service.

I should like to remind the members of this Association that next year Kraepelin's seventieth birthday is to take place. I am sure we have all recognized what a great work he has done, and I am the representative of England on a Committee which has been formed with the idea of trying to show some appreciation of the great clinical work that he has accomplished in connection with mental diseases. I propose to go to Munich next year—in February I think it is—and there has been a notice in the Journal that any support from England would be welcome. Science has no boundaries, and we all recognize, as Dr. Robertson has shown, the great value of Kraepelin's work, and however little we do, it will be very much appreciated by the medical faculty in Munich. In fact I had a letter the other day from Prof. Plaut. I pointed out to him that at the present time he must not expect very much, because we were very

highly taxed on account of the war, but I did not think the same feeling existed now in England—certainly not amongst those who had had the opportunity of study in Munich, or of benefiting from Kraepelin's teaching—that existed during the war. I mention these facts because I should like it to be known that any support that you can give will be greatly appreciated.

With respect to Dr. Robertson's kind reference to my work, I feel that there is a great deal yet to be done in the study of dementia præcox. In a paper that I wrote for *Ramón y Cajal's Seventieth Birthday Memoir*, I came to the conclusion that we should regard the cause of dementia præcox as genetic in origin, not affecting only the brain, but probably the organs of the whole of the body, and it would be shown in the highest levels of the brain particularly, for reasons which I gave. I pointed out those reasons in a paper in the *Journal*, and it shows itself most manifestly in the reproductive organs probably because in the reproductive organs there is an active proliferation of cells going on, so that if there is a genetic inadequacy it shows itself in the whole body, and the more I study the question the more I am convinced of that, because one finds the pituitary gland and the adrenal gland affected as well, and I have no doubt if we could really understand the chemistry sufficiently we should find the liver and probably other organs of the body affected also. It would be very interesting, I think, if someone would undertake the investigation of the vegetative nervous system. One thing that strikes me with regard to these cases is that there is a deficiency in oxidation processes in the body. At the present time we are trying to determine that by estimating the basal metabolism in a way that has not been done before, and that is—we have at Birmingham constructed a respiration chamber in which we can place patients for a couple of hours and find out the basal metabolism. One has such great difficulties in getting the patients to breathe in a bag because they are under abnormal conditions, but if you put them in a comfortable room, marked on the outside "Oxygen treatment" in order to produce no alarm to the patients, then they are under fairly normal conditions; and it is quite a nice room that they are put into. Through the ingenuity of Dr. Pickworth and the help of Prof. Haldane and Dr. Graham we have been enabled to make very careful analyses, and so far as the observations go at present we are getting results, but of course I should not say anything about it until we have made comparative tests with normal people and with different forms of insanity. I feel myself that what we really want is a careful study of each individual—of the biological entity. It is the individual factor that comes in very greatly, and we can only get at that by a careful record of the family history. I took relative cards of all the people admitted into London Asylums. We have about 5,000 cards now, and one found that the onset of insanity in the offspring of parents who were admitted to the asylums was about twenty years difference, but in dementia præcox this condition was more marked than in other forms of insanity, and I think that there is always a tendency, as Maudsley said, either to end or mend a degenerate stock by bringing it on at an earlier age. I think it would be an extremely useful thing if one could obtain careful records of family history. It is easier, I find, to get a family history with people admitted into the ordinary asylums than in general practice. I saw a case of dementia præcox the other day, and I asked whether there was any insanity in the family; "Oh, no"—they denied it altogether. Well, I knew two or three in the family who were insane—I had seen them myself. So that it is very difficult, but I do think that it really turns on the hereditary factor, with some other environmental factor coming in, or several contributory factors such as I pointed out in that diagram yesterday. I think Dr. Robertson has placed the whole matter before us in an extremely lucid manner, and I quite agree with him that it would be difficult to accept fifteen varieties of dementia præcox. I think one point which I emphasized is of importance, and that is that it is very difficult to decide between suspension and suppression of function by the clinical symptoms; both will produce the same speech. It is those cases where there is a suspension of function, as in manic-depressive insanity, that you find no organic changes at all. You find cases of manic-depressive insanity that will show you no change in the reproductive endocrine system, and then they pass into dementia, and as soon as they pass into dementia then you find very much the same changes in the endocrine reproductive organs as in the primary dementia of adolescence. I think I would put

them all in the same group, but subdivided by varying conditions, though not perhaps divided into fifteen divisions such as Kraepelin puts them into. I should like to hear what Dr. Robertson thinks about that. I depend upon my own observations in connection with the melancholia in those cases that came on later in life, or manic-depressive insanity cases that later developed into dementia, where one found these same changes in the reproductive endocrine system that one finds in the primary dementia of adolescence. (Applause.)

Dr. C. H. BOND: I have no views to offer, but I would like to associate myself with those who have listened, and feel that they have had a delightful clinical lecture with the stimulus we always do get from Prof. Robertson, and, like him, we all feel that we have benefited by the same teaching to which Prof. Robertson alluded—I mean that of Sir Thomas Clouston. Looking back to those days, whatever our views were with regard to dementia præcox and any other of the Kraepelin clinical forms to which Prof. Robertson has alluded, one cannot but feel that we owe an enormous debt of gratitude to Kraepelin as one who has helped to clarify our thoughts. In those old days we were taught by Clouston with extraordinary vividness the passing phases of mental disorders, but what we were not taught wholly, not to the same extent, was what Sir Frederick alludes to as the longitudinal way of looking at it—what I might call the natural history of these disorders. That is what is so very helpful. Prof. Robertson, like myself, and like many of us here, will remember, although he has not specially alluded to it, a somewhat lengthy symposium that took place some years ago in our Association in which we had a series of papers and short addresses entitled “The Case against Dementia Præcox,” followed by “The Case for Dementia Præcox.” One cannot but be struck by this: I believe without exception that every member of the Association who took part in the case against dementia præcox freely uses the term now, and does not seem able to get on without it; and I think that is a somewhat striking testimony.

Now I have never been able to put it quite so vividly, but I have often felt what Prof. Robertson has likened to-day to the rainbow. It is a very good simile for teaching, but that being so, does it not rather suggest to us (and especially those to whom we are looking for guidance in the pathological line in laboratory investigation), that instead of investigating picked sets of cases, a great endeavour should be made to arrange that a continuous series of newly admitted cases should be subjected to these investigations on the lines we heard of yesterday.

One other point. We all feel the immense help from this mode of classification, but it is my duty to see a great many clinical records and glance at them—I am afraid often only too rapidly, but still one does one's best—and the danger that I see is that there is far too great a readiness to endeavour to make a diagnosis, and to be content with that. Afterwards the notes of the cases as I read them often fell very short of a systematic record of symptoms and are of but little scientific value, and that surely is to be sternly deprecated. I am throwing no bricks, because I know that in many of the hospitals there is not sufficient time to do what is right because of the paucity of the medical staff, but still, making all that allowance, I think more could be done, and should be done, in the records of our cases to give a much more useful clinical description of them, and to put down facts which, when the synthetic mind comes to review these records, will enable something of real value to be made out of them from the clinical side, to go hand in hand with work which lies more in the laboratory. I throw this out as a suggestion: A mode of help in this direction which I personally, when superintendent of a hospital, found of the utmost value, was to make fuller and better use of our trained nursing staff. I do not believe the members realize perhaps what can be done by encouraging the nurses—I will not say to make daily, but occasional records whenever there is a change in behaviour or an event worthy of mention. I do not mean the official records in the day and night reports, but that, on loose sheets, one for each patient which moves with the patient from ward to ward, the nurse in charge by day and by night shall before going off duty enter up anything that seemed noteworthy. These when gathered together and laid before the medical officer when he comes to make records are of great value. In my hands at least I found them of the utmost value from the scientific side, and it also had—which was not to be despised—a great value in training and encouraging the nurses. They were

made to feel a certain amount of responsibility for the clinical observations of the case.

Let me again express my thanks. I should have been sorry if I had missed this paper. (Applause.)

Dr. T. C. MACKENZIE: I should like to put a question to Prof. Robertson, and it is this. Assuming his conception of dementia præcox, to what extent does he think the higher-grade imbecile is capable of developing the ordinary clinical signs of dementia præcox? That is to say, is it a disease which may be superimposed on such a state of congenital defect as to cause the case to be called one of mild imbecility?

Dr. J. G. SOUTAR: I think that the question which Dr. Mackenzie has asked raises the whole question as to whether we are dealing with anything more than the mere labelling of the various forms of disorder of mind. All we can say is this—that this mind is disordered, and for purposes of classification and merely convenience we attach this label to that particular manifestation of disorder, and the other label to another manifestation of disorder. The disease is the disorder in the mind. Its manifestation we agree to call dementia præcox at one time, melancholia at another time, and manic-depressive insanity at another time, and so on, but these are mere matters of convenience. I do not think that anything in the nature of a definite entity beyond perhaps some such conditions as general paralysis can really be recognized. I think all that we have heard from our pathologists is this: that they have discovered certain manifestations coincident with certain conditions of mental disorder. A very striking thing was mentioned to-day—that certain cases of manic-depressive insanity ultimately may come under the label of dementia præcox, and that then there becomes manifested the pathological conditions that have been more or less associated with dementia præcox. In fact the whole thing is so very, very vague that I think we could hardly go beyond this fact—that there are certain persons born into the world who have a defect in their capacity for a full evolution to enable them to stand the stress beyond a certain point, and quite a large number of potential dementia præcox cases never develop dementia præcox at all, because they have not been subjected to the stresses which would manifest the disorder in their case. I think one sees a good many people with regard to whom one says: "How fortunate it is for that man that he has never had any great stress imposed upon him; that life has been an easy thing for him, and he has slipped along as quite a useful member of the community." That is to say, he has lived within his limitations. The consideration Prof. Robertson has given to this very important subject is very illuminating, and causes us to reflect, but I am not quite sure what his own decision was, as to whether he definitely decided to call dementia præcox an entity or to say that it was not one. (Applause.)

Dr. F. H. EDWARDS: Prof. Robertson has made reference to the name of the late Dr. Mercier, and recalls his constant teaching that all forms of mental disorder were due to two things—heredity and stress. One feels naturally that the conditions which arise in the disease called dementia præcox are, ordinarily speaking, due to the stress that comes with adolescence; in fact, it is the direct descendant of the disease which we knew, I think, as adolescent insanity. We are all now aware, of course, of the wonderful research work that Sir Frederick Mott has carried out in connection with the genital organs, particularly in the case of the testicle, with regard to a long series of cases of dementia præcox which he has examined. I really rather wished to give you one little clinical fact which came to my knowledge within the last year, which I got from a medical man who was qualified in Constantinople, and who practised for many years in Egypt. I happened to ask as a matter of interest whether those people who have been rendered impotent by castration were liable to mental disorder, and he said that he had no particular knowledge of mental diseases at all, but that as far as he knew and in his experience they were not so liable, and I throw out the suggestion from a clinical standpoint. For some years now with regard to all cases of dementia præcox we have had a blood-count taken in such cases as have come under our care, and particularly in that variety of dementia præcox which is called the katatonic variety, and it is unquestionably the case that a considerable number of these cases have a diminished number of white blood-cells, and where the white blood-cell count drops below 5,000 we have made it

a practice to set up an artificial lymphocytosis, and I think really from the prognostic standpoint we find with a white blood-count one has a definite basis of treatment, and such cases in my experience—and they are a type we have had most frequently—have made good recoveries.

May I join my thanks to the others for this excellent paper?

Sir FREDERICK MOTT: May I say one word in answer to what Dr. Edwards has said? I should not think that point that you brought forward about castration was any argument at all. I purposely said that it was the whole body that was affected—genetic inadequacy.

Dr. EDWARDS: It was a clinical factor, I thought.

Sir FREDERICK MOTT: It is an expression of genetic inadequacy in the whole body. The removal of the testes has nothing to do with it.

Dr. EDWARDS: No.

Sir FREDERICK MOTT: Because it is a different thing altogether. That argument was put forward at the meeting at Cambridge, and I answered it in exactly the same way.

Prof. ROBERTSON, in reply, said: I will just answer quite briefly with regard to the question that Dr. Mackenzie asked me, as to whether you might have dementia præcox occurring in cases of mental defect. It does occur in these cases, although I do not think quite so commonly as it does in other individuals who, without being mentally defective, show nervous symptoms; but undoubtedly it does occur in defectives, and Kraepelin calls these cases, cases of engrafted dementia præcox—dementia præcox engrafted on mental defect. I may say also that, curiously enough, it has been suggested by many that there is a psychogenic factor in dementia præcox, and one would expect this would operate more in highly cultured society than in one that was more or less uncivilized and barbarous, but that is not the case. You get cases of dementia præcox occurring in the lowest types of savage life that we have, which apparently present much the same symptoms as they do in highly educated persons. Then again in relation to what Dr. Mackenzie said, Sir Thomas Clouston used to express the theory that in imbecility you had the defect showing itself early—perhaps even in ante-natal life, or very shortly after birth, but in other cases you had the weakened brain which was able to sustain itself as a child until it came to years of maturity, and then broke down under the strain, and he regarded adolescent insanity sometimes as a late imbecility; that instead of the defect occurring very early it occurred later.

I have to thank you for the reception you have given to my paper, Gentlemen. (Applause.)

The PRESIDENT: I am sorry, Col. Dawson, we will not have time to take your paper now, but if the meeting will accept it as read it will be published in the usual way. There are some other communications that suffered a similar fate.

Col. DAWSON: I think I would prefer to hold my paper over, Sir. (Agreed.)

THE ASSOCIATION AND THE IRISH FREE STATE.

Dr. P. O'DOHERTY: Might I crave your indulgence, Mr. President, to say a few words on a matter that is not perhaps quite relevant to the business here to-day? I am one of the representatives from the major portion of Ireland, known as the Free State, which comprises as you know twenty-six counties. I am one of the junior superintendents here present, but I would like to remind the Association that the name of it is "The Association of Great Britain and Ireland." I was painfully surprised at the function last night to listen to the remarks of one of the representatives of the Northern Government. I have no desire to create discord in an Association such as this, the more so as we have experienced such extraordinary hospitality from our President, who has been my friend and mentor for many years, and especially the extraordinary hospitality which proceeded from the representatives of the Northern Government and the Municipality and University of Belfast, but I would like to impress upon this Association that in all their gatherings, whether business or social, the matter of politics should be rigidly excluded. (Hear, hear.) On very many occasions during this function it has been driven into me that the only part of Ireland that was considered was the Northern portion known as

Ulster. I wish to lodge my protest especially to the speech that was delivered last night by, I think, Sir Ernest Clark, and which I looked upon as a piece of propaganda, especially at this acute stage of our history here in Ireland, when the boundary question is so much in evidence.

Perhaps I might say a few words as to how we are getting on in the Free State with regard to asylum matters. I should say that, like the Northern Government, we, freed from the shackles of a type of government that was rather inelastic and given much to red tape, are now embarking, just as the Northern Government is, on new schemes which in the course of time may result in a great improvement in our conditions as regards asylum matters. I would point to one matter especially: That is, that in future all our medical officers, before they are confirmed in their appointments, will have to furnish a Diploma in Psychological Medicine. (Applause.) We have as our Inspector Dr. Kelly, who, although comparatively young, is giving every encouragement and help to the superintendents throughout the country, and is making wonderful progress under great difficulties.

I apologize for introducing the subject to which I referred, and I hope you will pardon me. I felt very much inclined last night to protest, but I thought that an occasion at which only members of the Association were present would be more fitting, and that reference to the matter would be less likely to create discord. (Applause.)

The PRESIDENT: I am sure everybody sympathizes with the position Dr. O'Doherty felt himself in last night. Everybody takes their own view of these matters. He has a very intimate knowledge of what is happening elsewhere, and we must all feel he has acted in an exceedingly tactful and considerate manner. I am sure you will all appreciate that. (Applause.)

INSPECTION OF THE ASYLUM, AND LUNCHEON.

After the asylum had been inspected, by the kind invitation of Col. the Rt. Hon. R. D. Perceval-Maxwell, D.S.O., and the Committee of Management, members and their friends were hospitably entertained to luncheon.

By the kindness of the President, each member was presented with a booklet of nineteen excellent reproductions of photographs showing internal and external views of the asylum, the Queen's University, the City Hall, and other places of interest visited by members during their stay at Belfast. A "Foreword" sketched the history of the asylum, and on the back of the cover was the programme of music performed during luncheon and at the garden party by the Band of the 2nd Batt., the Queen's Own Royal West Kent Regiment (by kind permission of Lt.-Col. J. T. T. W. Fiennes and officers).

SPEECHES.

The CHAIRMAN (Col. PERCEVAL-MAXWELL), who presided, said: I welcome the Association to the ancient Borough of Downpatrick, the burial-place of Ireland's patron saint, the cradle of Christianity in this country—a psychological society the oldest and most distinguished in the world. The Committee are proud of Dr. Nolan's election to the Presidency of the Association. We are fully aware of how anxious he was at all times to promote the welfare of the patients and the staff, and to make the institution second to none either in Ireland or the sister country of Great Britain. Accordingly we tried to help him in every way possible, even if sometimes curtailed to some extent by *£ s. d.* I have known Dr. Nolan for many years as a friend, while latterly I have been brought into close touch with him officially. Dr. Nolan's professional abilities were acknowledged; he was a grand organizer; he had won the esteem and respect of all classes. We are only sorry that Mrs. Nolan was prevented from being with us to-day owing to illness. Both Dr. and Mrs. Nolan had proved themselves good friends to every charitable undertaking in the district, whether in raising funds for the County Infirmary or the Nursing Society. The Association, in honouring Dr. Nolan, honoured County Down. In conclusion I wish the members success in their work, and hope that during the remainder of their stay they will make as keen a psychological study of this country as North of Ireland people so often make of Great Britain.

Dr. C. H. BOND: I am sure none of us wish to leave before something has been said by way of appreciation of a day we will not lightly forget. In the course

of our proceedings here to-day two Biblical episodes, have occurred to me. One is the reference to the Temple money-changers. There was our President longing this morning to get to work on the programme of the day, whilst in the same room there was going on a great deal of money-changing, which was inevitable, but the changers declined to budge. (Laughter.) Secondly, the occasion of good wine being left to the last. A most delightful programme in Ulster is drawing to an end, and at its conclusion—because I believe it is the conclusion of the serious portion of it; (to-morrow begins the excursion)—we have had this visit to your hospital. I think we have all been round it and I wish my tour could have been a little more leisurely, because there was so much I would like to have seen with greater detail, but I am certain there is not one of us here that will not go away from this hospital feeling that although it is seventy years old or thereabouts, there is a spirit of progress at work here, and a desire to see that the patients are not merely rightly done by, but are happy and have all the best and most modern means of treatment. Now the control of these hospitals is invested by the law in a Visiting Committee, and that Committee the public surely may rightly expect to have a spirit of humanity, but be that ever so great—and it is clear it is great here—it must be guided on medical lines. Mere spirit of humanity will not lead us anything like far enough, and the members of those committees rightly look to their medical superintendents to suggest and guide them in medical matters. I am certain there is again not one of us here who does not see that that joint spirit has been working together here. I could say much and go into a great deal of detail, but my eyes are on the clock, which warns me that my train must be almost within earshot of the station. (Hear, hear.)

With regard to Dr. Nolan: I could not help feeling curious as to that magnificent cup we see on the table. I did not know that it had anything to do with Dr. Nolan, but I have been told that it is famous as a cricket cup of great value won by Downpatrick, and Dr. Nolan has been asked to take charge of it. Gentlemen, does that not show which way the wind of affection and respect blows?

I am going to move a vote of most hearty thanks, not only for your generous hospitality here to-day, but for a most enjoyable visit. (Applause.)

Dr. H. C. MARR: One of the speakers last night informed us that the Irish went over to Scotland and gave their name to Scotland. That is quite correct, but I would like to have told Prof. Lindsay that some time before that a very eminent person had come from the banks of the Clyde to Ireland—St. Patrick—and I have not the slightest doubt that after he had civilized the people of Ireland they passed over into Scotland. I say that with the proverbial modesty of the Scot. (Laughter.) But all civilization has not left Ireland, and we as the Medico-Psychological Association have experienced the abounding hospitality of the people of Northern Ireland. We heard a great deal about a boundary being in question. Well, whatever may be in the air politically, certainly there is no boundary so far as Irish hospitality is concerned. (Hear, hear.)

I have been through Dr. Nolan's most interesting institution, and where all is so good—because he makes so much of the most modern methods of care and treatment of the insane—I should like to refer just to one little point. In going through the institution I was very much struck by this fact: that the so-called single rooms which used to be used for the seclusion of noisy and dangerous patients are now given as rooms to privileged people. (Hear, hear.) Some of them were very nicely furnished, and would give one the impression that patients who used these rooms would certainly appreciate them and endeavour to keep them for all the time possible. In addition to that there has been a great deal of painting going on, and what struck me was this—that some of the rooms are in exactly the same colours as are the rooms of the new clinic in Paris, which is the very latest system of treating mental cases. There they have called in for the purpose of consultation the most eminent artists of Paris, to advise with the medical men as to the harmonizing of the colours. All the bed-screens and all woodwork harmonize, and the result produces in the patients coming into these institutions brightness and happiness. I quite agree with Dr. Bond that this institution is in the very forefront not only of the British asylums, but I should say of any asylum in Europe. (Applause.) I should like you to know that the enthusiasm of Dr. Nolan, our respected President, is as great

to-day as it was when first I met him ; he seems not to have changed in any respect, and I hope he will long continue thus.

I would just like to second the resolution in these words, and I will ask you to give a very cordial vote of thanks to the Directors and Dr. Nolan for the hospitality they have given us to-day. (Hear, hear; Applause.)

Dr. NOLAN, in gratefully responding, said : Any measure of administrative success I have attained is due to the kind assistance and co-operation of the committee. The Association is the source of present-day knowledge of psychiatry, enlightened methods of institutional management, and the raising of the standard of nursing—all much more important than colour schemes.

AFTERNOON SESSION.—JULY 4.

At Down District Asylum, Downpatrick, the President in the Chair.

PAPER.

"The Belfast War Hospital and its Work, 1917-1919, by Lt.-Col. W. R. Dawson, O.B.E.

The reading of this paper gave rise to an interesting discussion, after which the official work of the gathering concluded with the customary votes of thanks.

GARDEN PARTY.

The ensuing garden party in the charming grounds of the institution, the band of the West Kent Regiment being in attendance, was restricted by the oncoming of rain after hours of sunshine.

"FOR KING AND COUNTRY."

The Association, the guests of one of the most loyal cities of the Empire, could not be unmindful of the splendid part played by the men of Ulster in the never-to-be-forgotten struggle against Prussian world domination. Thus it was appropriate that on behalf of the Association, on the evening of Friday, July 4, Dr. Menzies, a Past-President, reverently placed a wreath in position at the base of the Cenotaph. Speaking in Latin, he imparted both dignity and solemnity to the occasion. Among those present were Lady Turner, the Lady Mayoress of Belfast, and Mrs. McMordie, M.P.

SATURDAY, JULY 5.

This day was devoted to seeing something of the surrounding country. An excursion by chais-à-bancs was arranged, commencing from the City Hall at 9.45 a.m., which proceeded through Bryansford (through Tullymore Park, by kind permission of the Earl of Roden), to Hilltown and Rostrevor. Luncheon was partaken of at the Great Northern Hotel. The party left at 3 p.m. for Newcastle, *via* Mourne Park (by kind permission of the Earl of Kilmorey) to Kilkeel. Tea was served at Slieve Donard Hotel.

EDUCATIONAL NOTES.

Bethlem Royal Hospital, S.E. 1.—A Course of Lectures and Practical Instruction for the Diploma in Psychological Medicine, granted by the various Universities, will be held at Bethlem Royal Hospital twice yearly, during the spring and autumn.

The next course begins on September 15, 1924, and will conclude in December. It consists of two parts, Part A dealing with the Anatomy, Histology and Physiology of the Nervous System and Psychology, and Part B dealing with Neurology, Psychological Medicine and Mental Deficiency. The fees for the whole of this Course of Lectures and Demonstrations are 15 guineas, or 10 guineas for Part A or Part B separately.

In addition to this Course, Clinical Instruction in Psychological Medicine is given at Bethlem Royal Hospital every morning (except Wednesdays) at 11 a.m. The fee for Post-Graduates is 5 guineas for three months, but a reduction is made to those who attend the Course for the Diploma in Psychological Medicine.

The Lecturers are: F. G. Parsons, F.R.C.S.; C. Worster-Drought, M.A., M.D., M.R.C.P.; F. C. E. Danvers-Atkinson, M.B.; Clement Lovell, M.D., B.S.; William Brown, M.A., D.Sc., M.D., M.R.C.P.; J. A. Hadfield, M.A., M.B., Ch.B.; James Collier, B.Sc., M.D., F.R.C.P.; E. D. Macnamara, M.A., M.D., F.R.C.P.; W. H. B. Stoddart, M.D., F.R.C.P.; Robert H. Cole, M.D., F.R.C.P.; J. G. Porter Phillips, M.D., F.R.C.P.; Thomas Beaton, O.B.E., M.D., M.R.C.P.; C. Stanford Read, M.D.; M. Hamblin Smith, M.A., M.D.; A. F. Tredgold, M.D., M.R.C.P., F.R.S. Edin.

The National Hospital for the Paralyzed and Epileptic, Queen's Square, Bloomsbury, W.C. 1.—Syllabus of Post-Graduate Course, October 6 to November 28, 1924.

The course will consist of the following subjects: (1) Out-Patient Clinics, Mondays, Tuesdays, Thursdays and Fridays, 2 p.m.; (2) Clinical Lectures and Demonstrations, Mondays, Tuesdays, Thursdays and Fridays, 3.30 p.m.; (3) Lectures on the Anatomy and Physiology of the Nervous System (if sufficient applicants), Tuesdays and Fridays during October, 12 noon; (4) Lectures on the Pathology of the Nervous System, Mondays, 12 noon; (5) Clinical Demonstrations on Methods of Examination (if sufficient applicants), Wednesdays and Thursdays, 10 a.m.

Mr. Armour and Mr. Sargent operate at the Hospital on Tuesday and Friday mornings at 9 a.m. or at such other times as may be announced.

Any part of the course may be taken separately. Special arrangements will be made for those unable to take the whole Course.

Fees should be paid to the Secretary of the Hospital at the Office on entering for the Course.

For further particulars apply to J. G. GREENFIELD, *Dean of Medical School.*

Tavistock Clinic for Functional Nerve Cases, 51, Tavistock Square, W.C. 1.—Autumn term, 1924. A course of ten lectures on Elementary Psychotherapy will be given by H. Crichton Miller, M.A., M.D., on Mondays at 5.30 p.m., beginning Monday, October 13. Fee for the course: medical practitioners, £2 2s.; students, £1 1s. Single tickets, 4s.

THE NATIONAL COUNCIL FOR MENTAL HYGIENE.

THE Annual Meeting of the National Council for Mental Hygiene was held on Wednesday, September 24, 1924, at the Federation of Medical and Allied Services, 128, Watford Place, London, W. 1.

In the absence of Sir Courtauld Thomson, Sir Maurice Craig was voted to the chair. The principal business was the presentation of the First Report, 1923-24, the financial statement, and the appointment of auditors for the coming year. The Committee was re-appointed with a few additional names.

The financial statement up to June 30, 1924, was read by Lord Southborough, the Hon. Treasurer. The general account showed receipts amounting to £1,019 1s. 6d. and £50 had been donated to the Publicity Account. The balance-sheet showed a balance at the bank and in hand of £266 8s.

The report as printed and circulated was unanimously adopted subject to some verbal corrections. The following paragraphs are reproduced for the information of our readers:

INITIAL WORK OF THE COUNCIL.

During the period under review the Executive Committee was obliged to give much of its time to elaborating the constitution of the National Council. Many hours were occupied in framing bye-laws and regulations, a labour which was rendered much lighter by Dr. J. R. Lord, one of the Honorary Secretaries, who, at great cost to his health, spent much of his time and energy in their preparation. These Bye-laws were finally passed at a meeting of the General Committee held on March 25, 1924.

At the same meeting it was decided to form three sub-committees to deal with special aspects of the National Council's activities:

Sub-Committee No. 1: The Prevention and Early Treatment of Mental Disorders.

Sub-Committee No. 2: The Care, After-Care and Treatment of the Insane.

Sub-Committee No. 3: Mental Deficiency, Crime, etc.

SUB-COMMITTEE No. 1 (Chairman, Sir Maurice Craig; Joint Hon. Secs., Dr. A. Helen Boyle, Miss Evelyn Fox).—*On the Prevention and Early Treatment of Mental Disorders.*

Terms of reference.

"To secure for psychology and psychiatry a position in the medical curriculum more commensurate with their importance and to further the closer association of psychology and general medicine.

"To combat the prevailing ignorance and superstition with which the laity regard mental disease. To educate medical students and nurses as to the true nature of mental disorder, and its intimate relationship to disorders of the body.

"To further the establishment of clinics and out-patient departments for the early treatment of mental disorders, and to encourage social service in connection therewith.

"To remove formalities and prejudices, which tend either to postpone the effective treatment of mental disorder or to divorce its treatment from that of physical disease.

"To encourage facilities for prophylactic treatment.

"To study the mental hygiene of child life in relation to parental responsibility and education, and to emphasise the importance of a knowledge of psychology among school medical officers and teachers."

This Sub-Committee have met on three occasions, and have had under consideration the question of obtaining information for a general survey throughout England, Scotland and Wales on the teaching of the subjects of functional nerve disorders and mental diseases and the treatment of persons suffering from them. With this end in view they have drawn up a letter and questionnaires addressed to the deans of medical schools and to the secretaries or chief administrative officers and matrons of the large hospitals throughout the country, and of certain infirmaries.

SUB-COMMITTEE No. 2 (Chairman, Dr. R. Worth; Hon. Sec., Dr. F. H. Edwards).

The Care, After-Care and Treatment of the Insane.

Terms of reference.

"To study all questions connected with the care and treatment of patients in mental hospitals.

"To raise the standard of general and medical education of all those engaged in nursing the insane.

"To investigate the existing arrangements for visiting in Mental Hospitals, and to facilitate the organization of After-Care.

"To assist in removing the stigma which handicaps those who have been mentally afflicted.

"To promote a closer liaison between the medical officers of mental hospitals and the general body of the profession."

Two meetings of Sub-Committee No. 2 have been held and the question of lay visitors to mental hospitals is at present under discussion.

SUB-COMMITTEE No. 3 (Chairman, Dr. W. A. Potts; Hon. Sec., Dr. H. Feize Stephens).—*Mental Deficiency, Crime, etc.*

Terms of reference.

"To study mental deficiency, its causes and prevention, and its relation to crime, dependency and prostitution.

"To inquire into the working of the Mental Deficiency Act with a view to its amendment or revision."

Two meetings of Sub-Committee No. 3 have been held. The Sub-Committee is collecting data on—

(1) Institutional accommodation for mental defectives.

(2) Teaching in mental deficiency.

(3) The arrangements made for recognizing mental defectives when they come before the courts.

The Sub-Committee is also preparing to investigate the causation of mental defect.

The Executive Committee have recently appointed a sub-committee whose particular work will be propaganda and the collection of funds.

Committee meetings.—Two meetings have been held during the year.

Executive Committee meetings.—Seven meetings have been held during the year.

Meetings and lectures.—Mr. Clifford Beers, the founder of the National Committee for Mental Hygiene in America, visited London in the summer of 1923, and two meetings were held at which he spoke. One was a drawing-room meeting at Sir Maurice Craig's house, when the Rev. H. R. L. Sheppard took the Chair, and at which nearly £100 was collected. The other was a public meeting at the Caxton Hall, when Sir Courtauld Thomson presided, and the meeting was addressed by Lord Burnham and Sir Maurice Craig as well as Mr. Clifford Beers.

Dr. Clarke, late Medical Director of the Canadian Committee for Mental Hygiene, whose recent death has come as a serious and unexpected blow to the movement in our country as well as to that in the great Dominion, very kindly and ably advocated our cause at a meeting of the British Medical Association at Brighton.

Dr. T. A. Ross gave a lecture on "The Mental Factor in Medicine" to the Medical and Physical Society at St. Thomas's Hospital in May of this year, and Dr. J. L. Birley addressed the nurses at that Institution on the same subject.

International Congress.—Dr. Helen Boyle represented the National Council at the European International Congress in Paris. This Congress was held in preparation for the world conference, which it is hoped will take place in America in 1926.

Finance.—The work of the National Council is much crippled by lack of sufficient financial assistance. The actual rent of the offices at Windsor House has been guaranteed for three years by Dr. A. Helen Boyle, who has been most active and generous in the help she has given to the Council.

The Council wish to express their gratitude to the Honorary Auditors, Messrs. Blackburns, Barton, Mayhew & Co., and to the Honorary Solicitors, Messrs. Charles Russell & Co., for their valuable help.

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CORRESPONDENCE.

To the Editors of the JOURNAL OF MENTAL SCIENCE.

DEAR SIRS,—There must be many of your readers who, on reading Dr. Carswell's Maudsley Lecture as published in your last issue, feel that his deduction that there is no room left for psychogenesis as a causative factor in the production of mental disorders is, to put it mildly, absolutely unwarranted. It seems that there are many alienists who take the view that because heredity is such a constant factor in the causation of such disorders, that therefore it is a powerful factor, yet nothing may be further from the truth. How many useful citizens there are whose family histories will not bear the light of day, and yet who have never seen the inside of an asylum! For every patient who is admitted to an asylum and whose mental disease is ascribed to heredity, it would not be difficult to produce two or three useful citizens whose family histories in this respect would prove to be just as black or blacker. Even if heredity could be proved to exist as a causative factor in all forms of mental disease, why is it that A, whose family history may be bad, becomes a patient in an asylum, while B, whose family history may be just as bad or worse, continues to lead the life of a useful member of society?

The obvious answer is that the one has not been subjected to the same strains or stresses as the other. Such strains or stresses may be purely physical, or a combination of strains physical and mental, but surely also they may be purely mental. Until someone will produce statistics showing the percentages of good, bad and indifferent family histories of people living outside the asylums as compared with those of people living inside asylum walls, heredity as an important factor in the causation of mental disease must take a back seat.

I am, Sirs,

Yours, etc.,

Khanka, Egypt;
August 29, 1924.

R. S. MILLER, M.D.,
Director, Mental Hospital.

OBITUARY.

SIR FREDERICK NEEDHAM, M.D.St. And., M.R.C.P.Edin., M.R.C.S.Eng.

It was with very great regret that we heard of the death, on September 6, at Bournemouth, of Sir Frederick Needham.

We are promised an extended memoir of the deceased Knight from the pen of Dr. C. Hubert Bond—and none knew him better, either officially or privately—for our January number, so our comments at the present moment need be only of the briefest.

Sir Frederick's work as a Commissioner in Lunacy and of the Board of Control (England and Wales) for some twenty-seven years brought his enlightened attitude to the care and treatment of the mentally afflicted, and especially mental hospital administration, constantly before members of our Association.

Although he was ever ready to help and advise—for he was really of a most kindly disposition—yet he had a powerful personality and a dominant will and, when circumstances called for it, could apply in full measure such *vis-a-tergo* as was necessary to give effect to his views. He was a tower of strength in times of trouble and adversity, and a certain guide on occasions of doubt and anxiety. He was admired and respected by many, loved by those who were privileged to know him well, and held in awe by not a few.

Sir Frederick Needham had been for nearly two years the *doyen* of our Association, having become an ordinary member as far back as 1859. He was President for the year 1887, and was in 1889 elected an Honorary Member.

He was gathered to his fathers at the ripe old age of 88—a truly grand old man, now at rest in the peace “which passeth all understanding.”

JOHN R. LORD.

NOTICES OF MEETINGS.

Quarterly General.—November 20, 1924; February 19, 1925; May 21, 1925.

South-Eastern Division.—October 8, 1924, at Peckham House, London, S.E. 15.

South-Western Division.—October 23, 1924, at The Old Manor, Salisbury; April 23, 1925, at Brislington House, Bristol.

Scottish Division.—November 28, 1924, at the Aberdeen Royal Mental Hospital.

Irish Division.—November 6, 1924, at the Royal College of Physicians, Dublin.

APPOINTMENT.

PASMORE, E. S., M.D., M.R.C.P.Lond., Hon. Senior Demonstrator, Department of Philosophy and Psychology, University College, London.

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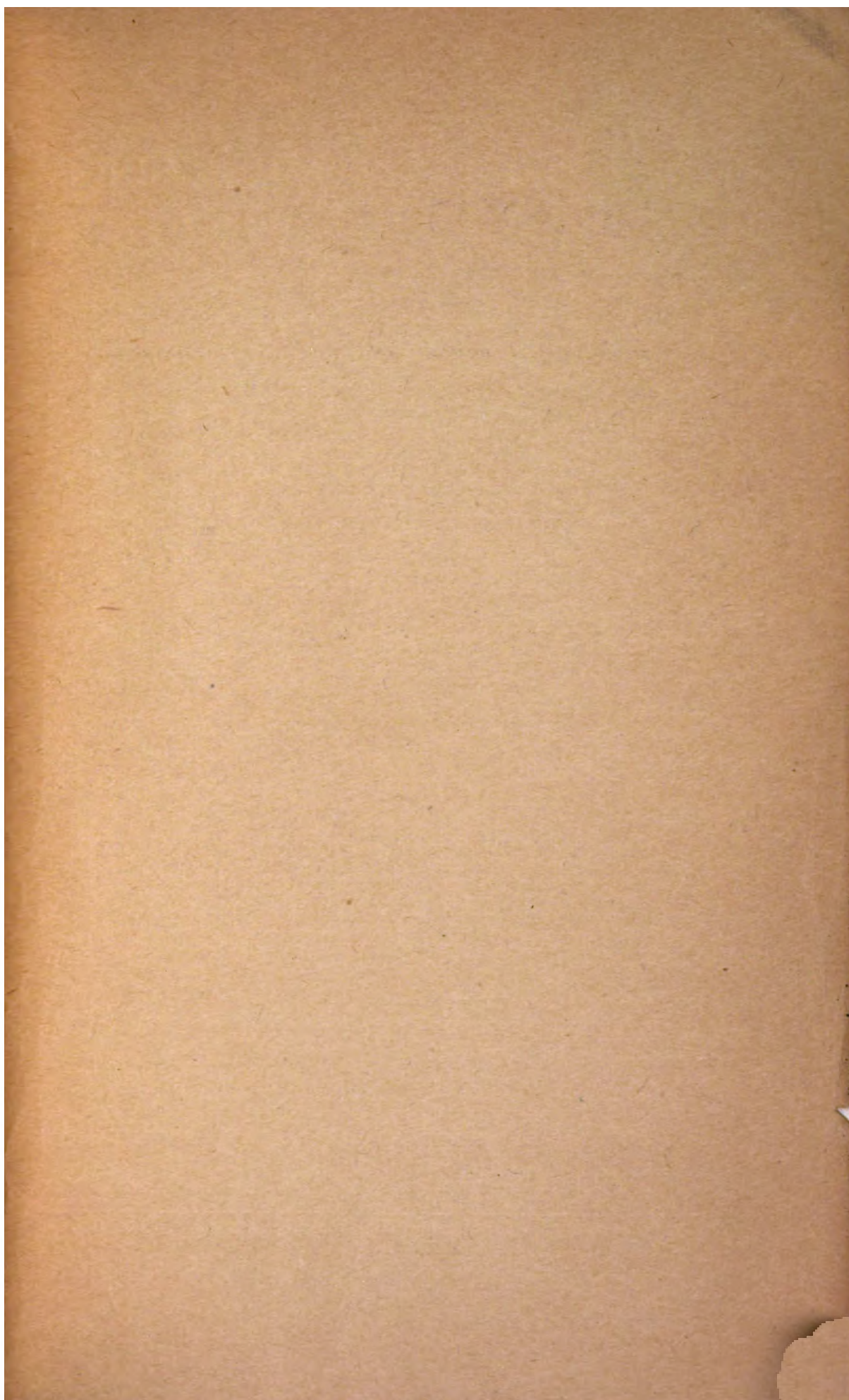
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